Restek Sample Handling

Set Your Sights on Superior Performance

Restek PAL SPME Arrow

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

RESTEK Pure Chromatography www.restek.com

Set Your Sights on Superior Performance

Solid phase microextraction (SPME) is a fast, automated sample preparation technology that reduces sample handling, extraction time, and solvent consumption, making it a popular choice in environmental, food, and clinical laboratories. However, traditional SPME fiber technology has some significant drawbacks, including poor mechanical stability and a small phase volume.

The Restek PAL SPME Arrow system (patent pending) is a revolutionary change in microextraction that combines exceptional robustness with faster extraction times and trace-level sensitivity (Table I). In contrast to traditional SPME fibers, SPME Arrows contain significantly more phase volume, which allows more target analyte to be extracted in less time. In addition, the stainless-steel construction, unique Arrow tip, inner stabilizing rod, and outer sheath design fully protect the phase, minimizing both mechanical damage and analyte loss during sample transfer.

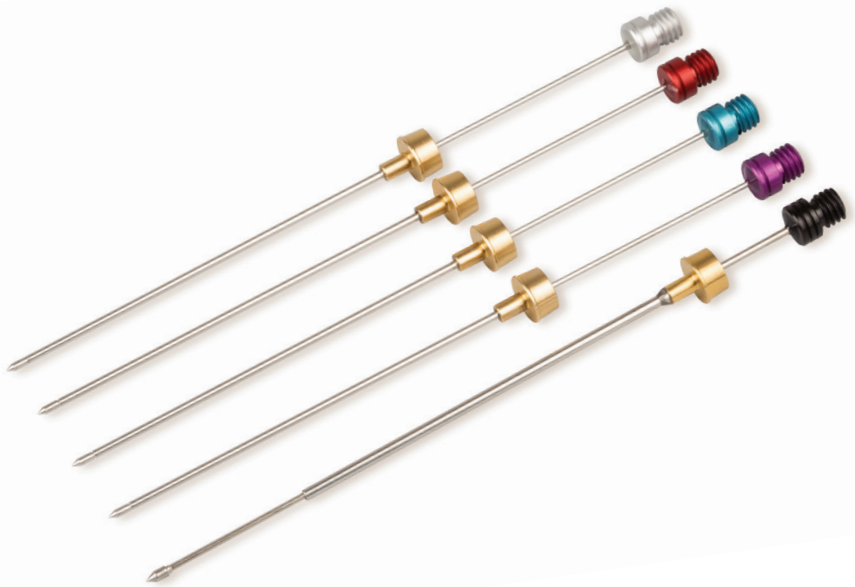


Table I: Comparing Restek PAL SPME Arrow to Traditional SPME Fiber (Headspace Technique)

	Traditional Fibers	1.1 mm Arrow	1.5 mm Arrow	The Arrow Advantage
Rugged stainless-steel construction • **Protective sheath** • **Stabilizing inner rod** • **Arrow-shaped tip**	No	Yes	Yes	• **Longer lifetimes:** Arrow construction protects the phase and minimizes both damage and analyte loss. • **Less downtime** due to breakage. • **Eliminate septa coring.**
Surface area	9.4 mm^2	44 mm^2	63 mm^2	Increase sample throughput—higher surface area lets you reduce extraction time and **analyze more samples per shift.**
Phase (PDMS) volume	0.6 µL	3.8 µL	12 µL	With significantly more phase, SPME Arrow provides better sensitivity so you can **lower detection limits with confidence.**

Our product line is continually expanding! See what's new at **www.restek.com/SPME**

On Target: Longer Lifetime

One of the main drawbacks to SPME fibers is their fragility. Even during routine use, they are easily damaged and can be irreparably broken (Figure 1). Busy labs will benefit greatly from the reliability of rugged Restek PAL SPME Arrow. The unique stainless-steel Arrow design includes a robust inner stabilizing rod that resists bending and breakage, as well as an outer sheath that protects the phase coating and prevents both physical damage and analyte loss. Typically, SPME Arrows perform well for hundreds of extractions, lasting 2–3 times longer than traditional SPME fibers. In addition, the unique arrow-shaped tip pierces the septum cleanly and with little resistance, extending septum lifetime (Figure 2).

Figure 1: SPME fibers break easily during routine operation.

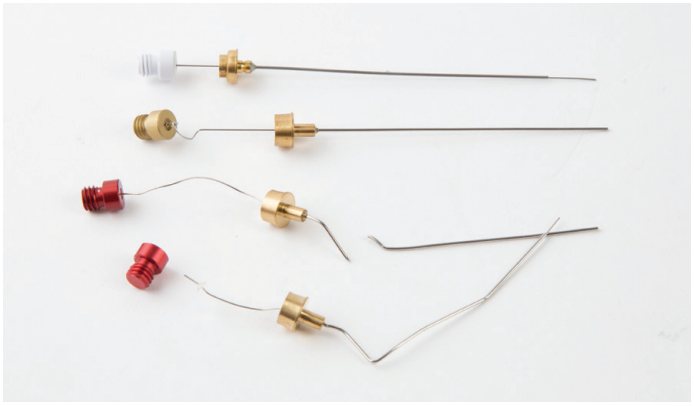
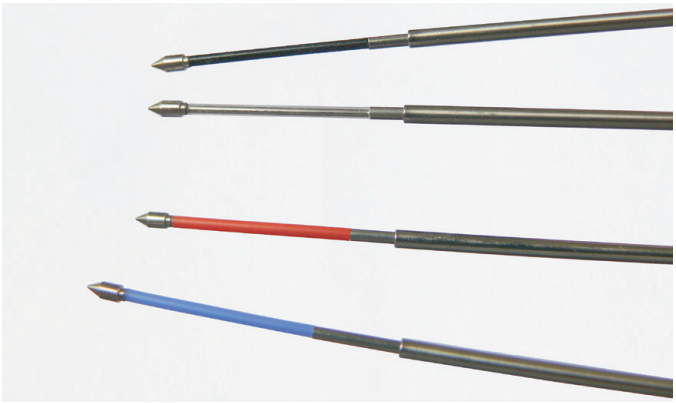


Figure 2: The rugged construction of the Restek PAL SPME Arrow prevents breakage under normal use.



Which Restek PAL SPME Arrow is best for my application?

Restek PAL SPME Arrows are suitable for a wide range of analyte chemistries and sample matrices. They are suitable for manual injection and compatible with PAL3 autosamplers. Choose the best SPME Arrow for your application based on the properties of your target compounds.

- Trace analysis in foodstuffs
- Drugs and pharmaceuticals
- Herbicides/pesticides
- Medical diagnostics
- Trace impurities in polymers and solid samples
- Solvent residues in raw materials
- Water analysis (organics in water)

Restek PAL SPME Arrow

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

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.

Description	Material	Hub Color	Thickness (µm)	Needle Diameter (mm)	Recommended Analytes	qty.	cat.#
SPME Arrow	Polydimethylsiloxane (PDMS)	Red	100 µm	1.1 mm	Volatile, 60–275 g/mol*	ea.	27485
SPME Arrow	Polydimethylsiloxane (PDMS)	Red	100 µm	1.5 mm	Volatile, 60–275 g/mol*	ea.	27877
SPME Arrow	Polydimethylsiloxane (PDMS)	Black	250 µm	1.5 mm	Volatile, 60–275 g/mol (high capacity)*	ea.	27484
SPME Arrow	Polyacrylate	Gray	100 µm	1.1 mm	Polar, semivolatile, 80–300 g/mol*	ea.	27488
SPME Arrow	Carbon Wide Range (WR)/PDMS	Light Blue	120 µm	1.1 mm	Highly volatile, 30–225 g/mol*	ea.	27487
SPME Arrow	Carbon Wide Range (WR)/PDMS	Light Blue	120 µm	1.5 mm	Highly volatile, 30–225 g/mol*	ea.	27879
SPME Arrow	Divinylbenzene (DVB)/PDMS	Violet	120 µm	1.1 mm	Amines and polar compounds, 60–300 g/mol*	ea.	27486
SPME Arrow	Divinylbenzene (DVB)/PDMS	Violet	120 µm	1.5 mm	Aromatic semivolatile, 60–300 g/mol*	ea.	27878
SPME Arrow	DVB/Carbon WR/PDMS	Dark Gray	120 µm	1.1 mm	Volatile and semivolatile, 40–275 g/mol*	ea.	27875
SPME Arrow	DVB/Carbon WR/PDMS	Dark Gray	120 µm	1.5 mm	Volatile and semivolatile, 40–275 g/mol*	ea.	27876
SPME Arrow Method Development Kit						Set of 5	27489

*These molecular weight ranges are a reasonable approximation; however, end users should verify suitability for their specific application.
All Restek PAL SPME Arrows have 20 mm of phase bonded onto stainless steel.

On Target: Higher Sample Throughput

Restek PAL SPME Arrows provide much faster extraction times than traditional SPME fibers because Arrows have much more phase volume. As shown in Figure 3, the increased phase volume allows more target analyte to be extracted in just seconds using an Arrow than can be extracted from a traditional fiber. Being able to extract what you need in a fraction of the time means more samples can be analyzed per day, which improves lab efficiency and profitability. The example in Table II demonstrates a nearly 50% increase in productivity!

Figure 3: Benchmark Comparison of 1.1 mm SPME Arrow vs. Standard SPME Fiber for 2.5 ppb Volatiles in Headspace

Increase sample throughput by extracting more analyte in less time. With SPME Arrow, you can extract twice the amount in 15 sec than you can in 120 sec using a traditional fiber.

Arrow and fiber both have 100 µm PDMS coatings. Data points are replicate averages of summed responses of approximately 90 volatile compounds at each extraction time.

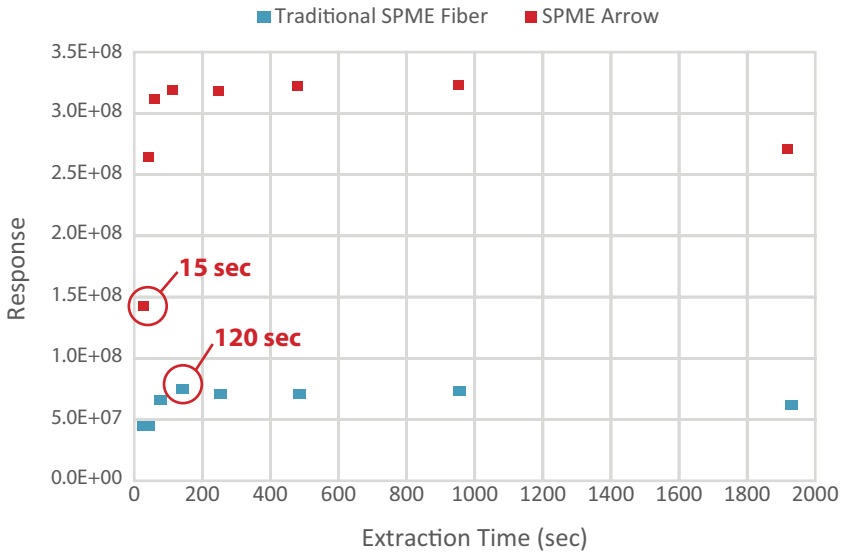


Table II: Analyze more samples per day with Restek PAL SPME Arrow.

	Sample Collection and Desorption Steps with Associated Times (sec)								
Target Analytes	**Select Sample Vial**	**Vial Incubation / Fiber Conditioning**	**Vial Transfer**	**Sample Extraction (Headspace)**	**GC Equilibration**	**Desorb Fiber**	**Return Sample Vial**	**Total Time**	**Samples per Day**
Traditional SPME Fiber	22	120	20	**120**	15	10	15	322	**268**
SPME Arrow	22	120	20	**15**	15	10	15	217	**398** (~50% increase)

Note: Processes that take <10 sec to perform were omitted from the table. Actual samples per day is dependent on GC cycle time.

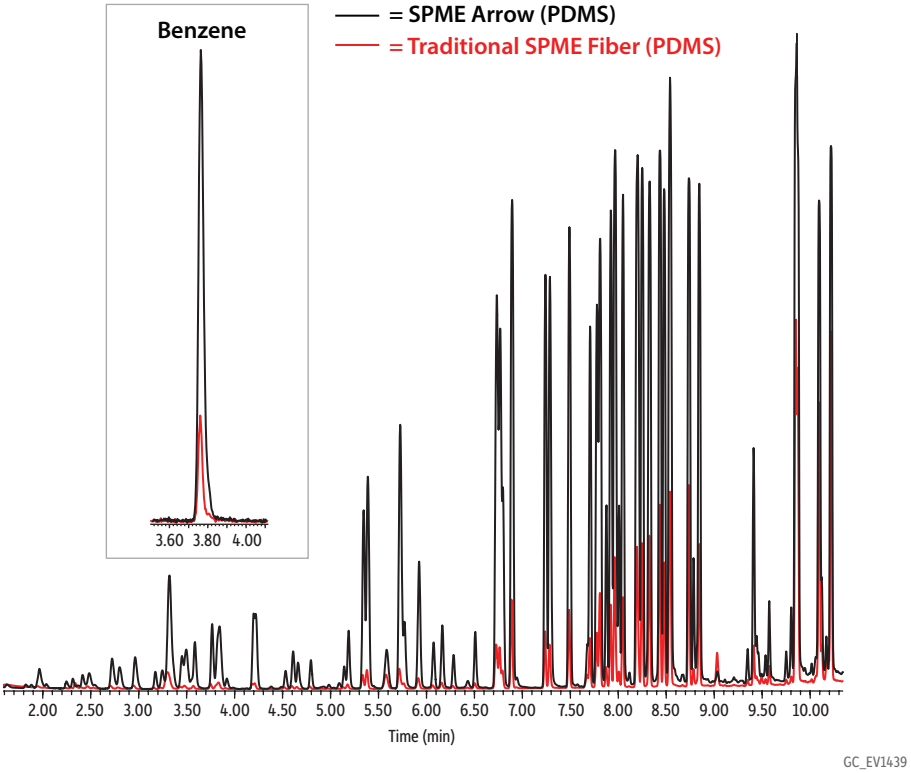
On Target: Lower Detection Limits

Developing a new method or trying to improve the performance of an existing one? Restek PAL SPME Arrows have more phase volume, so they provide much greater sensitivity than traditional fibers. To demonstrate this, 82 volatile compounds were analyzed under three different headspace extraction time and extraction volume combinations. Results under all experimental conditions definitively show that Arrow outperforms traditional SPME fiber and provides much higher analyte responses (Table III and Figure 4).

Table III: Analyte response is much higher with SPME Arrow than with a traditional SPME fiber.

		Average % Increase in Response of Arrow vs. Traditional Fiber	
Extraction Time (min)	Extraction Volume (mL Water)	1.1 mm Arrow	1.5 mm Arrow
10	10	297%	527%
5	10	618%	896%
10	5	446%	634%

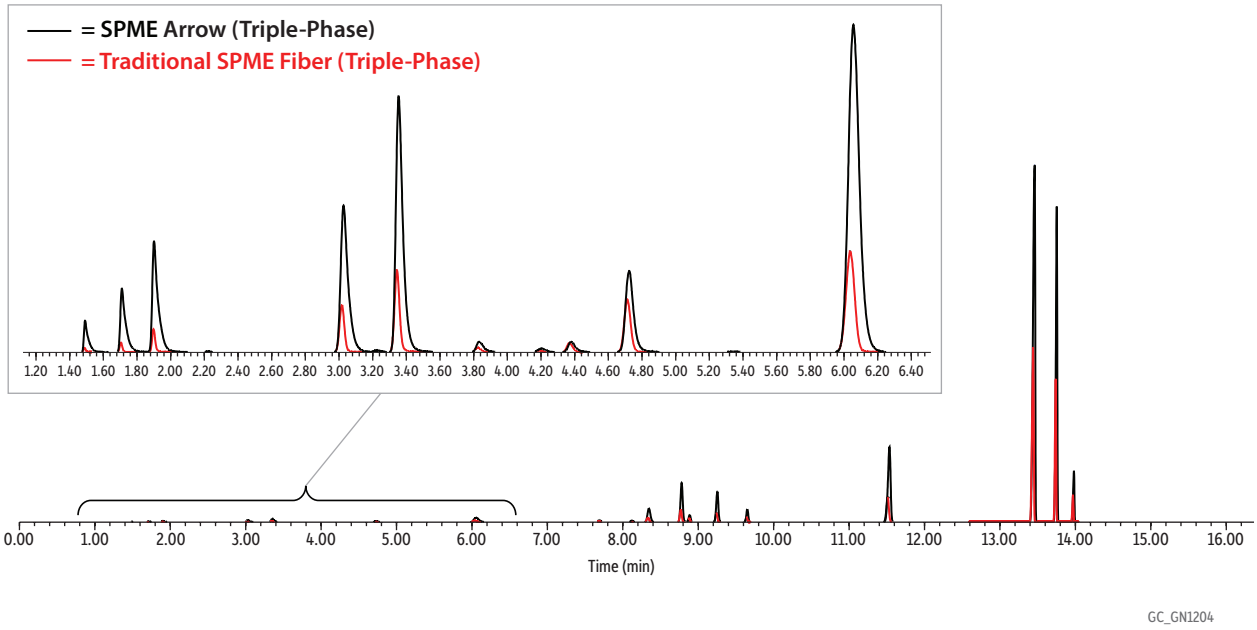
Figure 4: Restek PAL SPME Arrow extracts more target analyte from samples, allowing lower detection limits.



Total ion chromatogram (TIC). Black trace = 1.1 mm Arrow. Red trace = traditional SPME fiber.
Both were 100 µm PDMS run under identical headspace extraction, desorption, and analytical conditions.

Turning to the emerging cannabis market and the triple-phase (DVB/Carbon WR/PDMS) Arrow, you can also expect significantly higher analyte responses with residual solvents and other classes of compound (Figure 5).

Figure 5: Restek PAL SPME Arrow provides similarly superior results for residual solvents and other compounds.



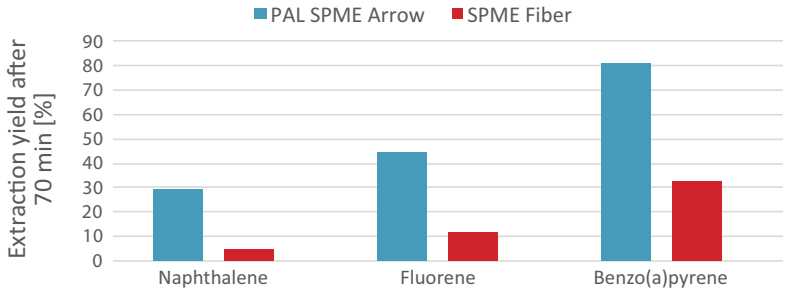
Total ion chromatogram (TIC). Black trace = 1.1 mm 120 µm Arrow. Red trace = traditional 80 µm SPME fiber. Both were triple-phase (DVB/Carbon WR/PDMS) run under identical headspace extraction, desorption, and analytical conditions.

Even after 70 minutes of immersion extraction, the compound concentration of PAHs for the traditional SPME fiber could not equal the amount obtained using a SPME Arrow (Figure 6).

Figure 6: Traditional SPME fibers cannot match the extraction yield of SPME Arrows (immersion extraction technique).

SPME Arrows extract more analyte so you can lower LODs with confidence.

Arrow and fiber both have 100 µm PDMS coatings. Analytes were at 50 ng/L.



Switch to SPME Arrow and Set Your Sights on Superior Performance!

Get set up for Superior SPME!

Restek PAL SPME Arrow

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- Faster extraction means higher sample throughput.
- Better sensitivity allows lower LODs.

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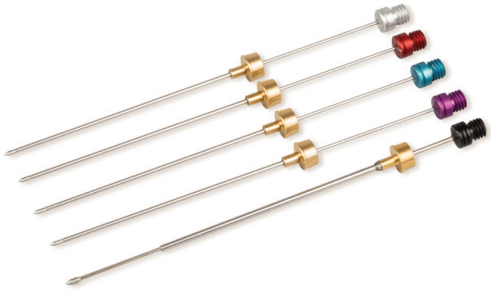

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SPME Arrow	DVB/Carbon WR/PDMS	Dark Gray	120 µm	1.5 mm	Volatile and semivolatile, 40–275 g/mol*	ea.	27876
SPME Arrow Method Development Kit						Set of 5	27489

*These molecular weight ranges are a reasonable approximation; however, end users should verify suitability for their specific application.
All Restek PAL SPME Arrows have 20 mm of phase bonded onto stainless steel.

Restek PAL SPME Manual Injection Kit

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

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

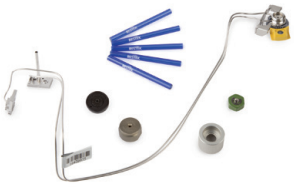
27490

Restek PAL SPME Arrow GC-Specific Conversion Kits

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

27492

27495



27357

27358

Description	Instrument	qty.	cat.#
Restek PAL SPME Arrow Conversion Kit			
Topaz 1.8 mm ID straight/SPME inlet liner, 5-pk. (cat.# 23280); Thermolite Plus septa, 3-pk. (cat.# 23864); Split/splitless weldment; large, canister-type filter (cat.# 27502); Septum nut for 6890 split/splitless weldments (cat.# 27503); Injector adaptor cup (cat.# 27496)	for Agilent 6890 Split/Splitless Injector (for canister-type filters)	kit	27492
Topaz 1.8 mm ID straight/SPME inlet liner, 5-pk. (cat.# 23280); Thermolite Plus septa, 3-pk. (cat.# 23864); Agilent split/splitless weldment and septum nut (cat.# 27504); Injector adaptor cup (cat.# 27496)	for Agilent 7890 Split/Splitless Injector	kit	27493
Topaz 1.8 mm ID straight/SPME inlet liner, 5-pk. (cat.# 23279); Thermolite Plus septa, 3 pk. (cat.# 23872); Injection port weldment (cat.# 27500); Needle guide/septum nut (cat.# 27501); Injector adaptor cup (cat.# 27497)	for Shimadzu GC-2010 Split/Splitless Injector (not compatible with SE or Plus models)	kit	27491
Topaz 1.8 mm ID straight/SPME inlet liner, 5-pk. (cat.# 23278); Premium nonstick BTO septa, 3-pk. (cat.# 27090); Septum cap (cat.# 27505); Liner cap/septum holder (cat.# 27506); Injector adaptor cup (cat.# 27498)	for Thermo TRACE 1300/1310 Split/ Splitless Injector	kit	27494
2.0 mm ID straight inlet liner, 5-pk. (cat.# 22267); Premium nonstick BTO septa, 3-pk. (cat.# 27096); Septum holder and support (cat.# 27507); Liner cap (cat.# 27508); Injector adaptor cup (cat.# 27499)	for Thermo TRACE Ultra Split/ Splitless Injector	kit	27495
Restek PAL SPME Arrow Conversion Kit with 1.1 mm Merlin Microseal			
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23280); 1.1 mm Microseal (cat.# 23232); Split/Splitless Weldment; Large Canister Type Filter (cat.# 27502); Adaptor Cup (cat.# 27496); Nut (cat.# 23228)	for Agilent 6890 Split/Splitless Injector (for canister-type filters)	kit	27356
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23280); 1.1 mm Microseal (cat.# 23232); Agilent Weldment (cat.# 27504); Adaptor Cup (cat.# 27496); Nut (cat.# 23228)	for Agilent 7890 Split/Splitless Injector	kit	27357
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23279); 1.1 mm Microseal (cat.# 23232); Port Weldment (cat.# 27500); Adaptor Cup (cat.# 27497); Adaptor Kit (cat.# 23229)	for Shimadzu GC-2010 Split/Splitless Injector (not compatible with SE or Plus models)	kit	27355
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23278); 1.1 mm Microseal (cat.# 23232); Liner Cap/Septum Holder (cat.# 27506); Adaptor Cup (cat.# 27498); Nut (cat.# 23230)	for Thermo TRACE 1300/1310 Split/ Splitless Injector	kit	27358
2.0 mm ID straight inlet liner, 5-pk. (cat.# 22267); 1.1 mm Microseal (cat.# 23232); Liner Cap (cat.# 27508); Adaptor Cup (cat.# 27499); Adaptor Kit (cat.# 23231)	for Thermo TRACE Ultra Split/ Splitless Injector	kit	27359
Restek PAL SPME Arrow Conversion Kit with 1.5 mm Merlin Microseal			
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23280); 1.5 mm Microseal (cat.# 23233); Split/Splitless Weldment and Large Canister Type Filter (cat.# 27502); Adaptor Cup (cat.# 27496); Nut (cat.# 23228)	for Agilent 6890 Split/Splitless Injector (for canister-type filters)	kit	27361
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23280); 1.5 mm Microseal (cat.# 23233); Agilent Weldment (cat.# 27504); Adaptor Cup (cat.# 27496); Nut (cat.# 23228)	for Agilent 7890 Split/Splitless Injector	kit	27362
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23279); 1.5 mm Microseal (cat.# 23233); Port Weldment (cat.# 27500); Adaptor Cup (cat.# 27497); Adaptor Kit (cat.# 23229)	for Shimadzu GC-2010 Split/Splitless Injector (not compatible with SE or Plus models)	kit	27360
Topaz 1.8 mm ID Straight/SPME inlet liner, 5-pk. (cat.# 23278); 1.5 mm Microseal (cat.# 23233); Liner Cap/ Septum Holder (cat.# 27506); Adaptor Cup (cat.# 27498); Adaptor Kit (cat.# 23230)	for Thermo TRACE 1300/1310 Split/ Splitless Injector	kit	27363
2.0 mm ID straight inlet liner, 5-pk. (cat.# 22267); 1.5 mm Microseal (cat.# 23233); Liner Cap (cat.# 27508); Adaptor Cup (cat.# 27499); Adaptor Kit (cat.# 23231)	for Thermo TRACE Ultra Split/ Splitless Injector	kit	27364

Accessories for SPME Arrows

Description	Instrument	qty.	cat.#
Injector adaptor cup	for Agilent GC 6890/7890 Split/Splitless Injector	ea.	27496
Injector adaptor cup	for Shimadzu GC 2010 Split/Splitless Injector	ea.	27497
Injector adaptor cup	for Thermo GC TRACE 1300/1310 Split/Splitless Injector	ea.	27498
Injector adaptor cup	for Thermo GC TRACE Ultra Split/Splitless Injector	ea.	27499
Injection port weldment	for Shimadzu GC 2010 Split/Splitless Injector	ea.	27500
Needle guide/septum nut	for Shimadzu GC 2010 Split/Splitless Injector	ea.	27501
Split/splitless weldment; large, canister-type filter	for Agilent GC 6890 Split/Splitless Injector	ea.	27502
Septum nut for split/splitless weldments	for Agilent GC 6890/7890 Split/Splitless Injector	ea.	27503
Split/splitless weldment and septum nut	for Agilent GC 7890 Split/Splitless Injector	ea.	27504
Septum cap	for Thermo GC TRACE 1300/1310 Split/Splitless Injector	ea.	27505
Liner cap/septum holder	for Thermo GC TRACE 1300/1310 Split/Splitless Injector	ea.	27506
Septum holder and support	for Thermo GC TRACE Ultra Split/Splitless Injector	ea.	27507
Liner cap	for Thermo GC TRACE Ultra Split/Splitless Injector	ea.	27508


27496


27503


27508

SPME Performance Test Mix (2 components)

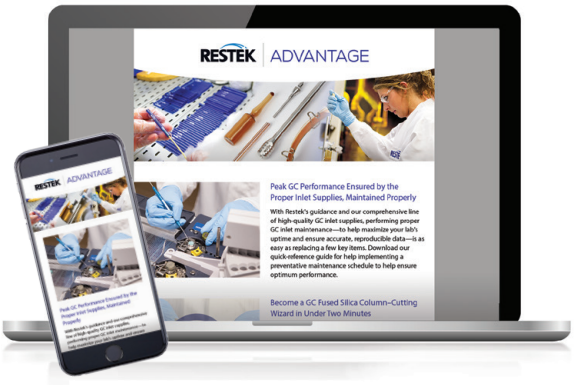
- Essential mix for establishing the performance of SPME fibers and SPME Arrows.
- Verified composition and stability.

Certified reference materials (CRMs) manufactured and QC-tested in Restek's ISO-accredited labs satisfy your ISO requirements.

Nitrobenzene (98-95-3)
2-Nitrotoluene (88-72-2)
1 µg/mL in water:methanol (99:1), 1 mL/ampul cat.# 31015 (3-pk.)

THE RESTEK ADVANTAGE

See What It Can Do for You and Your Lab



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

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GC Inlet Liners for SPME

* 100% SATISFACTION GUARANTEE: If your Topaz inlet liner does not perform to your expectations for any reason, simply contact Restek Technical Service or your local Restek representative and provide a sample chromatogram showing the problem. If our GC experts are not able to quickly and completely resolve the issue to your satisfaction, you will be given an account credit or replacement product (same cat.#) along with instructions for returning any unopened product. (Do not return product prior to receiving authorization.) For additional details about Restek's return policy, visit **www.restek.com/warranty**

Topaz 1.8 mm ID Straight/SPME Inlet Liner
for Shimadzu 17A, 2010, 2014, and 2030 GCs equipped with split/splitless inlets

ID x OD x Length	qty.	cat.#
Straight/SPME, Premium Deactivation, 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 Thermo TRACE 1300/1310 GCs equipped with SSL inlets

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

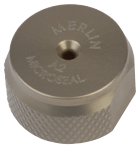
Topaz 1.8 mm ID Straight/SPME Inlet Liner
for Agilent GCs equipped with split/splitless inlets

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

2.0 mm ID Straight Inlet Liner
for Thermo TRACE, 8000 Series and Focus GCs equipped with SSL inlets

ID x OD x Length	qty.	cat.#
Straight, Standard Deactivation, Borosilicate Glass		
2.0 mm x 8.0 mm x 105 mm	5-pk.	22267

Merlin Microseals for SPME Arrow


23228

Merlin Microseal Nut for SPME Arrow for Agilent GCs

Description	Merlin#	qty.	cat.#
SPME Arrow Application Nut (3 to 100 psi) Includes: nut (1)	1000AG	ea.	23228


23229

Merlin Microseal Adaptor Kit for SPME Arrow for Shimadzu 2010, 2025, and 2030 GCs

Description	Merlin#	qty.	cat.#
SPME Arrow Application Adaptor Kit (3 to 100 psi) Includes: nut (1); adaptor (1); O-rings (4)	1000SH	ea.	23229


23230

Merlin Microseal Nut for SPME Arrow for Thermo TRACE 1300 and 1310 GCs

Description	Merlin#	qty.	cat.#
SPME Arrow Application Nut (3 to 100 psi) Includes: nut (1)	1000TS	ea.	23230


23231

Merlin Microseal Adaptor Kit for SPME Arrow for Thermo TRACE Ultra GCs

Description	Merlin#	qty.	cat.#
SPME Arrow Application Adaptor Kit (3 to 100 psi) Includes: nut (1); adaptors (3); O-rings (4)	1000TU	ea.	23231


23232

Replacement Microseals for Merlin Microseal Septa

Description	Merlin#	qty.	cat.#
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

SPME Vials, Caps, and Septa

Magnetic Screw-Thread Caps, 18 mm

Description	Septa Material	100-pk. cat.#	1,000-pk. cat.#
Magnetic Caps and Septa for SPME	Blue PTFE/Silicone, 1.5 mm thick	23090	23091
Magnetic Caps and Septa	Red PTFE/Silicone, 1.9 mm thick	23092	23093
Magnetic Caps and Septa	PTFE/Red Chlorobutyl	23094	23095

SPME MicroCenter Caps and Septa

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

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

Headspace Crimp Vials, 20 mm

Description	Volume	Color	Dimensions	100-pk. cat.#	1,000-pk. cat.#
Headspace Vial	6 mL	Clear	22 x 38 mm	21166	21167
Headspace Vial, Flat Bottom	10 mL	Clear	23 x 46 mm	24683	24684
Headspace Vial, Rounded Bottom	10 mL	Clear	23 x 46 mm	21164	21165
Headspace Vial, Flat Bottom	20 mL	Clear	23 x 75 mm	24685	24686
Headspace Vial, Rounded Bottom	20 mL	Clear	23 x 75 mm	21162	21163
Headspace Vial	27 mL	Clear	30 x 60 mm	21160	21161

6.0 mL Headspace Vial with PTFE/Silicone Seal

Headspace Screw-Thread Vials, 18 mm

Description	Volume	Color	Dimensions	100-pk. cat.#	1,000-pk. cat.#
Headspace Vial	10 mL	Clear	22 x 45 mm	23084	23085
Headspace Vial	10 mL	Amber	22 x 45 mm	23088	23089
Headspace Vial	20 mL	Clear	22 x 75 mm	23082	23083
Headspace Vial	20 mL	Amber	22 x 75 mm	23086	23087

More phase volume and robust construction mean Restek PAL SPME Arrows outperform traditional fibers.

- Rugged stainless-steel construction ensures longer lifetimes.
- Faster extraction increases productivity.
- Better sensitivity for lower LODs.

1.5 mm SPME Arrow (PDMS, 250 µm) Surface area: 63 mm², Volume: 12 µL

1.1 mm SPME Arrow (PDMS, 100 µm) Surface: 44 mm², Volume: 3.8 µL

SPME Fiber (PDMS, 100 µm) Surface area: 9.4 mm², Volume: 0.6 µL

Our product line is continually expanding!
See what's new at **www.restek.com/SPME**

RESTEK
Pure Chromatography

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

www.restek.com

Lit. Cat.# GNSS2642C-UNV