

SPME Compatible Autosampler Vials and Caps - Tech Information

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Solid Phase Micro-Extraction (SPME) requires vials and caps that support precise mechanical alignment, proper septum penetration, and reliable sealing under both ambient and heated headspace sampling conditions.

Not all headspace vials and caps perform equally in SPME workflows, as the fiber assembly must puncture the septum smoothly while maintaining vial integrity and preventing volatile loss. MICROSOLV offers several components specifically suited—or specially recommended—for SPME applications.

Vials Compatible with SPME

The following vial is fully compatible with SPME and has been engineered for proper alignment and fit with SPME autosamplers:

Compatible Vial

- **Catalog # [95010-0CV](#)**
 - 10 mL headspace vial
 - 46 × 22.5 mm
 - Screw-top design
 - Clear borosilicate glass
 - Round bottom
 - Precision threads; fully CTC-compliant

This vial supports consistent fiber positioning, optimal penetration resistance, and proper sealing for both HS and SPME modes on CTC and compatible systems.

Magnetic Screw Caps Suitable for SPME

Two magnetic screw cap types are listed as compatible with SPME, with one category being **especially suited** for SPME workflows due to its enhanced septum design.

Standard SPME-Compatible Cap

- **Catalog # [95020-45S-T](#)**
 - Magnetic screw cap (headspace)
 - Silver finish
 - 8 mm center hole
 - Silicone (transparent blue) / PTFE (white) septum
 - 45 Shore A hardness

- 1.3 mm thickness
- Precision threads

This cap is compatible, but not the optimal choice when repeated SPME fiber penetrations or higher-temperature cycles are expected.

Caps Especially Suited for SPME

- **Catalog # [95020-21S-T](#)**
 - Magnetic screw cap (headspace)
 - Silver
 - 8 mm center hole
 - *Pre-slit star-shaped septum* (white silicone / red PTFE)
 - 55 Shore A hardness
 - 1.5 mm thickness
 - 18 mm precision threads

The **pre-slit star septum** is particularly advantageous because it:

- Reduces fiber stress during penetration
- Minimizes core tearing of the septum
- Improves reproducibility in repeated SPME injections
- Helps preserve septum sealing integrity in both hot and cold cycles

This makes it the most SPME-friendly cap in MICRO SOLV's standard offering.

Autosampler Compatibility

The listed vials and caps are compatible with multiple industry-standard SPME and headspace autosamplers, including:

- Agilent G1888A
- Agilent / CTC Leap Combi PAL
- CTC Combi PAL HS Mode
- CTC Combi PAL SPME Mode
- Gerstel / Varian MPS 2
- Turbomax HS16 / HS40 / HS40XL / HS40 Trap / HS110 / HS110 Trap
- Shimadzu AOC-5000 HS
- Shimadzu AOC-5000 SPME

These compatibility listings confirm that the vials and caps meet the dimensional and operational requirements for commercial SPME fiber systems.

[Ordering information for Headspace Vials and Caps](#)

AUTOSAMPLER
VIALS AND CAPS

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