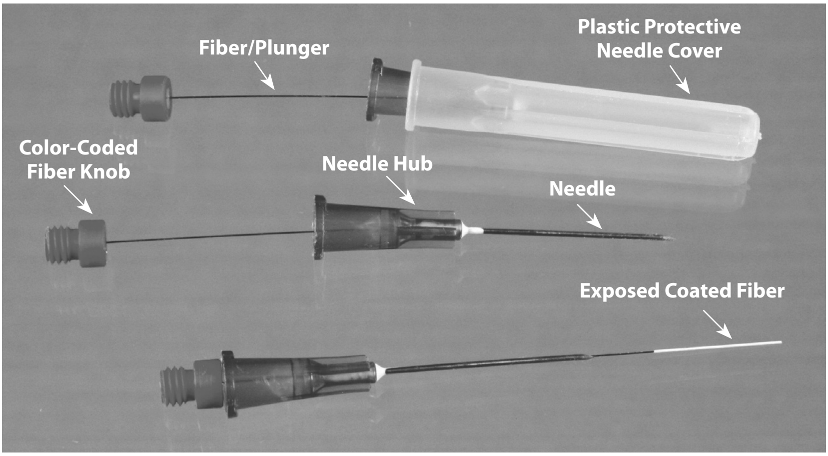
This Data Sheet Contains Important Information About The Product.

SPME-LC Fiber Probes, Cat. No. 57281-U

For laboratory use only. Not for drug, household or other use.



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Overview of Fibers

The SPME-LC fiber probes are intended as single-use devices for the extraction of small molecules out of a fluid followed by solvent desorption. The biocompatible nature of the coating allows the fibers to be immersed directly in biological fluids with minimal sample preparation. After extraction of the analytes, the fibers can be desorbed in a small volume of solvent. The solvent can be either injected directly into the HPLC unit, or it can be evaporated and the analytes re-suspended into water with a small amount of organic solvent. The method used is dependent upon the type of chromatographic column used for analysis. These fiber probes are not intended for thermal desorption.

How to Use the Fibers

1. Remove the plastic cover that protects the needle. BE AWARE THAT THE NEEDLE IS EXTREMELY SHARP, SO BE CAREFUL WHEN HANDLING THE DEVICE.
2. The fiber and plunger are one piece with a fixed exposure length of 1.5 cm of coating. To expose the fiber, push down on the fiber knob while supporting the wire with your fingers. **(NOTE: Sometimes you may encounter sufficient resistance, so you may need to hold and push the wire to expose the coated fiber portion).** If you encounter strong resistance when you initially try to move the wire plunger, you may gently pull back to release the wire from the sealant. Be careful not to pull the coated fiber back into the sealant. Push forward toward the needle as directed. Once the fiber wire is loosened, it should move more easily.
3. To retract the fiber back into the needle, simply pull back the wire using the fiber knob while holding the needle hub with your other hand. Gently retract the fiber into the needle. Do not pull the fiber too far so that the coating is pulled back into the sealant inside.
4. Be sure to store the probe with the fiber retracted and the cap over the needle.

Conditioning the Fiber Before Use

1. Prior to using the fiber, partially fill a vial with a solution of methanol containing 5-15% DI water and cap the vial with a PTFE-lined silicone septa.
2. Pierce the needle through the vial septum and while holding the needle hub, expose the fiber so that the coating is completely immersed in the solution.
3. After a minimum of 15 minutes, retract the fiber and insert it into another capped vial containing water with 5-15% methanol and expose the fiber to solution.
4. Allow the fiber to remain in this solution until ready to extract samples.

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Extraction of Analytes

In-Vitro Use

1. Fill a series of vials in a sampling tray with the samples to be extracted. Cap the vials with a PTFE-lined silicone septa.
2. Retract fiber and remove a fiber from the conditioning solution and pierce septum and expose fiber to solution. Repeat this step with each fiber until all of the fibers are in the samples to be extracted.
3. Place the vial tray on an orbital shaker and start the timing for the extraction process. Set the time for the specific amount of time.

In-Vivo Use

1. Set up samples or port shunt.
2. Retract and remove fiber from conditioning solvent.
3. With the conditioned fiber retracted, pierce either a port or tissue and expose the fiber to the sample for the desired amount of time.

Desorption of Analytes Off Fiber

1. During the extraction process, fill desorption vials (0.1 mm polypropylene conical vials, Cat. No. 24712) contained in a 2 mL vial tray with 75 µL–100 µL of the desorption solvent. Cap vials with silicone septa (Cat. No. 27093-U). Typical desorption solvent is acetonitrile:water 90:10 v/v with some added buffer to adjust the pH, usually around pH 7.
2. Retract fibers into the needle and remove the needle from the sample and pierce the capped vial and submerse the coated fiber into the desorption solvent. NOTE: IF FIBER IS COMING DIRECTLY OUT OF A BIOLOGICAL FLUID, RINSE THE FIBER IN DI WATER PRIOR TO PLACING IT IN THE DESORPTION SOLVENT TO REMOVE ANY LOOSELY BOUND RESIDUAL MATERIALS.
3. Once all of the fibers are in the desorption solvent, place vial tray on an orbital shaker and shake for 30 minutes or a time previously determined to fully desorb the analytes from the fiber into the solvent.

Analysis of Samples

1. Retract and remove fibers from vials and recap the vials.
2. If analyzing in the HILIC mode, mix the vials on a Vortex type mixer for several seconds each and place the vials in the autosampler tray.
3. Inject 5-20 µL of the sample onto the LC column.
4. If using reverse-phase columns, it may be necessary to evaporate the organic solvent and resuspend the analytes in buffered water containing 10% acetonitrile.
5. Place vials in autosampler for analysis.
6. Inject 5-20 µL of sample onto the column.

Solvent and pH Compatibility

The fiber coating is compatible in all solvents commonly used in LC. The fiber coating does not swell in any of the solvents or combination of solvents listed below:

Water	Ethanol	Hexane	Ethyl acetate
Acetonitrile	Acetone	Dichloromethane	
Methanol	Tetrahydrofuran	Isopropanol	

Do not put the plastic fiber hub in solvents. The pH range for the fibers is 1-9, but prolonged exposures >2 hours at pH levels >7.5 could slowly damage the silica.

Ordering Information

Description	Pk. Size	Cat. No.
SPME-LC Fiber Probes, C18	5	**57281-U**

This product and/or its uses may be covered by one or more of U.S. Patent Nos. 5,691,206, 7,232,689, 7,259,019, 7,384,794 and corresponding foreign patents.