



57300-U

Supelco

# SPME fiber assembly Polydimethylsiloxane (PDMS)

df 100 µm, needle size 24 ga, for use with manual holder



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**57342U**  
**SPME fiber assembly Polydimethylsiloxane (PDMS)**  
df 100 µm, for use with manual holder, needle size 23 ga



**57328U**  
**SPME fiber assembly Di vinylbenzene/Carboxen/ Polydimethylsiloxane (D VB/CAR/PDMS)**  
needle size 24 ga, for use with manual holder

## Properties

Related Categories		<a href="#">Analytical/Chromatography, Polydimethylsiloxane (PDMS) fibers, non-polar, SPME Fiber Assemblies, SPME Fibers and Holders, Sample Preparation &amp; Purification, Plus...</a>
material	fused silica fiber	
	red hub plain	
needle size	24 ga	
packaging	pkg of 3 × ea	
d <sub>f</sub>	100 μm	
fiber L	1 cm	
matrix active group	Polydimethylsiloxane (PDMS) coating	
	<a href="#">montrer plus (10)</a>	

## Description

**Application**  
Volatiles

## Safety Information

Safety Information for this product is unavailable at this time.

## Documents

Certificat d'Analyse

Enter Lot No.

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## Frequently Asked Questions

**Which document(s) contains shelf-life or expiration date information for a given product?**

If available for a given product, the recommended re-test date or the expiration date can be found on the Certificate of Analysis.

**How do I get lot-specific information or a Certificate of Analysis?**

The lot specific COA document can be found by entering the lot number above under the "Documents" section.

**How do I find price and availability?**

There are several ways to find pricing and availability for our products. Once you log onto our website, you will find the price and availability displayed on the product detail page. You can contact any of our Customer Sales and Service offices to receive a quote. USA customers: 1-800-325-3010 or view local office numbers.

**What is the maximum temperature for the 100 micron SPME fiber assembly Polydimethylsiloxane (PDMS), Product 57300-U?**


The maximum temperature is 280 °C. We recommend conditioning at 250 °C.

**Why should I use 100 micron SPME fiber assembly Polydimethylsiloxane (PDMS), Product 57300-U?**


The 100 micron fiber is designed for low molecular weight or volatile compounds that require a thick coating for adsorption.

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**57302**  
SPME fiber assembly Polydimethylsiloxane (PDMS)  
df 7 µm, needle size 24 ga, for use with manual holder




**57301**  
SPME fiber assembly Polydimethylsiloxane (PDMS)  
df 100 µm, for use with autosampler, needle size 24 ga



**57310U**  
SPME Fiber Assembly Polydimethylsiloxane/Divinylbenzene (PDMS/DVB)  
df 65 µm, needle size 24 ga, for use with manual holder




**57318**  
SPME fiber assembly Carboxen/Polydimethylsiloxane (CAR/PDMS)  
df 75 µm, for use with manual holder, needle size 24 ga




**57304**  
SPME fiber assembly polyacrylate (PA)  
df 85 µm, for use with manual holder, needle size 24 ga


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for use with 12mL SPE tube, pk of 20



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volume 7 mL, clear glass vial, O.D. × H 17 mm × 60 mm, thread 15-425



**58696U**  
PTFE Tubing  
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**507601**  
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volume 2 mL, clear glass vial, O.D. × H × I.D. 12 mm × 32 mm × 4.6 mL/ft, thread 8-425, Chromacol, 2-SV, pkg of 100 ea

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### Articles

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Forensic science encompasses a very broad range of analytes and analytical techniques. Sigma-Aldrich offers the standards and analytical tools required for quantitative analyses in this expansive field. Patrick Myers  
Reporter EU Volume 25  
Keywords: Forensic, Gas chromatography, Help, High performance liquid chromatography, Metabolites, Methods, Sample preparations, Search, Separation, Solid phase extractions, Solid phase microextractions, Solvents, Tools

[Development of a Method for Analysis of Phthalate Esters in Vegetable Oils](#)

Phthalates (PAEs) are a group of synthetic compounds mainly used as plasticizers. They have been classified as endocrine-disrupting chemicals and potential human cancer-causing agents<sup>1</sup>. PAEs present...

Professor Luigi Mondello, Analytical Chemistry/Food Chemistry Laboratories, University of Messina, Italy

Keywords: Cancer, Capillary electrophoresis, Chromatography, Gas chromatography, Mass selective detector, Mass spectrometry, Sample preparations, Separation, Size-exclusion chromatography, Solid phase microextractions, Solvents

GC Analysis of Amphetamines in Plasma on SLB®-5ms (20 m x 0.18 mm I.D., 0.36 µm) after SPME using 100 µm PDMS Fiber, Fast GC Analysis

From our library of Articles, Sigma-Aldrich presents GC Analysis of Amphetamines in Plasma on SLB®-5ms (20 m x 0.18 mm I.D., 0.36 µm) after SPME using 100 µm PDMS Fiber, Fast GC Analysis

Keywords: Chromatography, Clinical, Forensic, Gas chromatography, Pharmaceutical, Purification, Solid phase microextractions

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Keywords: Chromatography, Gas chromatography, Mass spectrometry, Pharmaceutical, Purification, Solid phase microextractions

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Keywords: Agriculture, Chromatography, Gas chromatography, Solid phase microextractions

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Keywords: Chromatography, Flame ionization detector, Gas chromatography, Pharmaceutical, Size-exclusion chromatography, Solid phase microextractions

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From our library of Articles, Sigma-Aldrich presents GC Analysis of Class 3 Residual Solvents on Equity®-1 after SPME using 100 µm PDMS Fiber

Keywords: Chromatography, Flame ionization detector, Gas chromatography, Pharmaceutical, Size-exclusion chromatography, Solid phase microextractions

GC Analysis of Class 3 Residual Solvents on VOCOL® after SPME using 100 µm PDMS Fiber

From our library of Articles, Sigma-Aldrich presents GC Analysis of Class 3 Residual Solvents on VOCOL® after SPME using 100 µm PDMS Fiber

Keywords: Chromatography, Flame ionization detector, Gas chromatography, Pharmaceutical, Size-exclusion chromatography, Solid phase microextractions

GC Analysis of Cocaine in Urine on a 100%Methyl Column after SPME using 100 µm PDMS Fiber

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Keywords: Chromatography, Gas chromatography, Nitrogen phosphorus detector, Pharmaceutical, Purification, Solid phase microextractions

GC Analysis of Fragrance Compounds in Shampoo Base on a 100% Methyl Column after SPME using 100 µm PDMS Fiber

From our library of Articles, Sigma-Aldrich presents GC Analysis of Fragrance Compounds in Shampoo Base on a 100% Methyl Column after SPME using 100 µm PDMS Fiber

Keywords: Chromatography, Cosmetics, Gas chromatography, Mass selective detector, Purification, Solid phase microextractions

GC Analysis of Gasoline Residue in Arson Samples on a 100% Methyl Column after SPME using 100 µm PDMS Fiber

From our library of Articles, Sigma-Aldrich presents GC Analysis of Gasoline Residue in Arson Samples on a 100% Methyl Column after SPME using 100 µm PDMS Fiber

Keywords: Chromatography, Flame ionization detector, Gas chromatography, Purification, Sample preparations, Size-exclusion chromatography, Solid phase microextractions

GC Analysis of Organochlorine Pesticides in Water on SPB®-5 after SPME using 100 µm PDMS Fiber

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Keywords: Chromatography, Electron capture detector, Environmental, Gas chromatography, Metabolites, Pesticides, Purification, Size-exclusion chromatography, Solid phase microextractions

GC Analysis of Organophosphorus Pesticides (OP-Pest) on a 5% Phenyl Column after SPME using 100 µm PDMS Fiber

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Keywords: Chromatography, Environmental, Gas chromatography, Mass spectrometry, Purification, Solid phase microextractions

GC Analysis of PCB Congeners in Stream Sediment on SPB®-Octyl after SPME using 100 µm PDMS Fiber

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Keywords: Chromatography, Environmental, Gas chromatography, Purification, Solid phase microextractions

GC Analysis of Phthalate Esters in Corn Oil (Spiked) on SLB®-5ms after SPME with a 100 µm PDMS Fiber

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Keywords: Agriculture, Chromatography, Gas chromatography, Mass spectrometry, Purification, Solid phase microextractions

GC Analysis of Phthalate Esters in Extra Virgin Olive Oil (Spiked) on SLB®-5ms after SPME using 100 µm PDMS Fiber

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Keywords: Chromatography, Gas chromatography, Mass spectrometry, Phase transitions, Separation, Size-exclusion chromatography, Solid phase microextractions

GC Analysis of Residual Solvents on SPB®-624 after SPME using 100 µm PDMS Fiber

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Keywords: Chromatography, Flame ionization detector, Gas chromatography, Pharmaceutical, Purification, Sample preparations, Solid phase microextractions

GC Analysis of Tricyclic Antidepressants in Urine on a 100%Methyl Column after SPME using 100 µm PDMS Fiber

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Keywords: Chromatography, Flame ionization detector, Gas chromatography, Pharmaceutical, Purification, Solid phase microextractions

GC Analysis of Volatiles in Limoncello on SLB®-5ms after SPME using a 100 µm PDMS Fiber

From our library of Articles, Sigma-Aldrich presents GC Analysis of Volatiles in Limoncello on SLB®-5ms after SPME using a 100 µm PDMS Fiber

Keywords: Chromatography, Flame ionization detector, Gas chromatography, Mass spectrometry, Purification, Sample preparations, Solid phase microextractions

GC Analysis of Volatiles in Water on SPB®-1 after SPME using 100 µm PDMS Fiber

From our library of Articles, Sigma-Aldrich presents GC Analysis of Volatiles in Water on SPB®-1 after SPME using 100 µm PDMS Fiber

Keywords: Chromatography, Flame ionization detector, Gas chromatography, Purification, Solid phase microextractions

SPME-GC-MS Determination of Phthalate Esters in Ramen Noodle Flavor Packets

In June of 2011, food safety authorities in Hong Kong found phthalate ester contamination in a variety of imported food and drink products<sup>1</sup>. Among these foods were several brands of ramen noodle kits...  
Katherine K. Stenerson  
Reporter US, Volume 30.1

Keywords: Chromatography, Food Safety, Gas chromatography, Gas chromatography mass spectrometry, Mass selective detector, Mass spectrometry, Sample preparations, Size-exclusion chromatography, Solid phase microextractions

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Fundamentos basicos de microextraccion en fase solida (SPME) y sus aplicaciones [Webinar]

En este webinar presentamos los fundamentos básicos de microextracción en fase sólida (SPME) y sus aplicaciones. SPME es una técnica para análisis de compuestos volátiles y semi-volátiles, fácil de u...  
Keywords: Solid phase microextractions

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[Headspace solid-phase microextraction-gas chromatography-mass spectrometry characterization of propolis volatile compounds.](#)

Federica Pellati et. al  
Journal of pharmaceutical and biomedical analysis, 84, undefined (2013-6-29)  
In this study, a novel and efficient method based on headspace solid-phase microextraction (HS-SPME), followed by gas chromatography-mass spectrometry (GC-MS), was developed for the analysis of propolis volatile compounds. The HS-SPME procedure, whos...[Read More](#)

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[Determination of disease biomarkers in Eucalyptus by comprehensive two-dimensional gas chromatography and multivariate data analysis.](#)

Leandro Wang Hantao et. al  
Journal of chromatography, A, 1279, undefined (2013-2-12)  
In this paper is reported the use of the chromatographic profiles of volatiles to determine disease markers in plants - in this case, leaves of Eucalyptus globulus contaminated by the necrotroph fungus Teratosphaeria nubilosa. The volatile fraction ...[Read More](#)

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[Measurement of trihalomethanes in potable and recreational waters using solid phase micro extraction with gas chromatography-mass spectrometry.](#)

M A Stack et. al  
Chemosphere, 41(11), undefined (2000-11-1)  
Solid phase micro extraction (SPME) was applied to the determination of selected trihalomethanes (THMs), chloroform, bromodichloromethane, dibromochloromethane, bromoform, in potable and recreational waters. The selected samples were environmentally ...[Read More](#)

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[Optimization of the derivatization reaction and the solid-phase microextraction conditions using a D-optimal design and three-way calibration in the determination of non-steroidal anti-inflammatory drugs in bovine milk by gas chromatography-mass spectrometry.](#)

David Arroyo et. al  
Journal of chromatography, A, 1218(28), undefined (2011-6-4)  
An experimental design optimization is reported of an analytical procedure used in the simultaneous determination of seven non-steroidal anti-inflammatory drugs (NSAIDs) in bovine milk by gas chromatography with mass spectrometry detection (GC-MS). T...[Read More](#)

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[Organic metabolites in exhaled human breath--a multivariate approach for identification of biomarkers in lung disorders.](#)

Elvira M Gaspar et. al  
Journal of chromatography, A, 1216(14), undefined (2008-11-28)  
The gas chromatographic profiles of exhaled air from lung cancer patients have been investigated. The breath from healthy volunteers, smokers and non-smokers, and lung cancer patients without treatment and under radio and/or chemotherapy, was collect...[Read More](#)

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[2-Methyl-3-furanthiol and methional are possible off-flavors in stored orange juice: aroma-similarity, NIF/SNIF GC-O, and GC analyses.](#)

Y Bezman et. al  
Journal of agricultural and food chemistry, 49(11), undefined (2001-11-21)  
The occurrence of methional in fresh orange juice, and possible occurrence of beta-damascenone in heated orange juice, has been previously suggested. Here we report on the occurrence of 2-methyl-3-furanthiol in the headspace, collected by solid-phase...[Read More](#)

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[Headspace solid-phase microextraction-gas chromatography-mass spectrometry for profiling free volatile compounds in Cabernet Sauvignon grapes and wines.](#)

Valentina Canuti et. al  
Journal of chromatography, A, 1216(15), undefined (2009-2-24)  
The complex aroma of wine is derived from many sources, with grape-derived components being responsible for the varietal character. The ability to monitor grape aroma compounds would allow for better understanding of how vineyard practices and winema...[Read More](#)

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[Influence of vine training and sunlight exposure on the 3-alkyl-2-methoxypyrazines content in musts and wines from the Vitis vinifera variety cabernet sauvignon.](#)

Cristina Sala et. al  
Journal of agricultural and food chemistry, 52(11), undefined (2004-5-27)  
The influence of vine training and sunlight exposure on the 3-alkyl-2-methoxypyrazines contents in musts and wines was studied by means of two previously reported methods based on headspace solid-phase micro-extraction. Experimental samples were moni...[Read More](#)

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[Tequila volatile characterization and ethyl ester determination by solid phase microextraction gas chromatography/mass spectrometry analysis.](#)

Belinda Vallejo-Cordoba et. al  
Journal of agricultural and food chemistry, 52(18), undefined (2004-9-18)  
Solid phase microextraction (SPME) and gas chromatography were used for tequila volatile characterization and ethyl ester quantitation. Several factors determined the differences in tequila volatile profiles obtained by the SPME technique, namely, sa...[Read More](#)

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[\[Preparation of a novel activated carbon coating fiber for solid phase micro-extraction and its application for halocarbon compound analysis in water\].](#)

Shutao Wang et. al  
Se pu = Chinese journal of chromatography, 22(5), undefined (2005-2-15)  
A novel activated carbon coating fiber used for solid phase micro-extraction (SPME) was prepared using activated carbon powder and silica resin adhesive. The extraction properties of the novel activated carbon coating fiber were investigated. The res...[Read More](#)

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[The scent of Mycobacterium tuberculosis.](#)

Mona Syhre and Stephen T Chambers  
Tuberculosis (Edinburgh, Scotland), 88(4), undefined (2008-2-26)  
Worldwide, tuberculosis (TB) kills nearly 2 million people annually, yet rapid diagnosis still relies on a 100-year-old method of sputum staining for acid-fast bacilli. The advent of solid phase micro-extraction and gas chromatography/mass spectromet...[Read More](#)

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[Gas chromatography coupled to mass spectrometry analysis of volatiles, sugars, organic acids and aminoacids in Valencia Late orange juice and reliability of the Automated Mass Spectral Deconvolution and Identification System for their automatic identification and quantification.](#)

Manuela Cerdán-Calero et. al  
Journal of chromatography, A, 1241, undefined (2012-4-27)  
Neutral volatiles and non-volatile polar compounds (sugars, organic acids and aminoacids) present in Valencia Late orange juice have been analysed by Gas Chromatography coupled to Mass Spectrometry (GC-MS). Before analysis, the neutral volatiles hav...[Read More](#)

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[Solid-phase microextraction of hop volatiles. Potential use for determination and verification of hop varieties.](#)

M Kovacevic and M Kac  
Journal of chromatography, A, 918(1), undefined (2001-6-14)  
The composition of hop essential oil is an important tool for evaluation of hop quality. As each hop variety has a typical essential oil pattern (fingerprint), hop oil analyses can be used to distinguish between hop varieties. The headspace solid-p...[Read More](#)

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[Coating of peanuts with edible whey protein film containing alpha-tocopherol and ascorbyl palmitate.](#)

J H Han et. al  
Journal of food science, 73(8), undefined (2008-11-21)  
Physical properties of whey protein isolate (WPI) coating solution incorporating ascorbic palmitate (AP) and alpha-tocopherol (tocopherol) were characterized, and the antioxidant activity of dried WPI coatings against lipid oxidation in roasted peanu...[Read More](#)

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Trace level analysis of corky off-flavor compounds: development of a new analytical method based on solid phase extraction and analysis by multidimensional gas chromatography with mass spectrometric detection.  
Hans-Georg Schmarr et. al  
Journal of chromatography. A, 1226, undefined (2011-11-8)  
This work describes the development of a trace level (<1 ngL(-1)) analysis of haloanisoles in complex wine matrix. The suggested method involves sample preparation based on solid phase extraction, a clean-up to remove acidic compounds, concentration ...[Read More](#)  
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