



TRACE LABORATORIES, INC

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Solid Phase Microextraction (SPME)



- Simple solvent free analysis
- Field screening and air monitoring
- Very sensitive for trace analysis
- Suitable for most analytes utilizing GC analysis. Couple this with Trace Laboratories' highly sensitive MS/MS for your ultra-trace needs.

Solid phase microextraction, or SPME is a robust solvent less sampling technique capable of concentrating volatile and non-volatile organic compounds in liquid or gas phase for subsequent gas chromatography (GC) analysis. This innovative technique is fast, economical and has the versatility to suit the majority of organic analytes.

Take advantage of SPME reliability and versatility for the analysis of:

- Paints, epoxies and coatings
- Flavors
- Plant materials analysis
- Off-gassing/Out-gassing
- Contamination

SPME works by exposing a polymeric or sorbent fiber coating to a liquid or gas sample. The fiber either absorbs (polymer coating) or adsorbs (liquid coating) compounds from the sample by direct immersion or exposure to headspace. After an equilibrium is reached between the fiber coating and sample, the SPME fiber is subsequently inserted directly into the gas chromatograph for desorption and separation of the analytes for qualification or quantitation.

SPME is an attractive option for your analysis for many reasons. Being a solvent less technique, it is economical, fast and very sensitive. Coupled with Trace Laboratories GC-MS/MS, some analytes can be obtained in the parts per trillion (ppt) level.

Being a robust technique, SPME can also provide routine analysis at high concentration levels.



Trace Laboratories has experience and success using SPME for:

- Glycols in organic emulsion
- Pesticides in oils
- Drinking and Wastewater pollutants
- Effluent compliance
- Alcohol composition
- Solvent purity
- Semi-volatiles in polymeric sludge
- Contaminants in plant material
- General composition analysis
- Accident investigation
- Epoxy composition
- Solder flux
- Fuels



Special Note: With proper instruction, SPME can be used by non-scientist personnel for customers on-site and for field analysis to minimize and/or eliminate sampling times and reduce costs.

Consider SPME, and contact Trace Laboratories Inc. to discuss solutions for your next routine or custom organics analysis.

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