



Filtration



ISERA



Solid Phase Extraction



Derivatization



Micro Extraction

Sample Preparation

INNOVATION & SERVICE
IN ANALYTICS

SPE - SERAbond

Solid phase extraction (**SPE**) is an important tool in order to remove interfering components of the matrix or to enrich the analyte of interest. For the production of **SERAbond** SPE cartridges only materials of proven quality are used:



Silica	high purity - spherical particles - large surface - broad selection of phases
Polymer (PS-DVB)	pH stable - no silanol activity - different polarities
Florisil	high purity - compliant with regulated, analytical applications

Table: Selected Examples

Phase	Character	Typical Application
Si	highly polar	Separation of analytes from non-polar matrices. e.g. pesticides, aflatoxins and vitamins from food, chloramphenicol from meat, dexamethasone from ointments
C18 (ec)	nonpolar	Separation of analytes from polar matrices. e.g. aflatoxins, antibiotics, PAH, preservatives, nicotine, fatty acids, vitamins, caffeine, barbiturates
XHLB	nonpolar, hydrophilic modification	Separation from aqueous and biological matrices. e.g. pharmaceutical substances, phenols, caffeine, statins
Florisil	polar	Proven phase for hydrocarbons from mineral oil (regarding EN 9377-2 or H53 method). Additionally e.g.: pesticides, PCB from environmental samples, steroids in serum

- reproducible quality
- broad range of applications
- high recovery rates

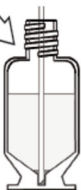
DLLME - *bilimex*



With the **Dispersive Liquid Liquid Micro Extraction (DLLME)** small quantities of an analyte can be extracted and concentrated in a small volume of a solvent.



An extraction agent and a dispersion agent are added. In the formed dispersion the analyte concentrates in the fine droplets of the extraction agent.



The phases are separated by centrifugation. Afterwards, the enriched sample can be taken and analysed.

- easy to handle
- minimal consumption of solvents
- high enrichment
- very versatile
- efficient and automatable



bilimex® Extractor

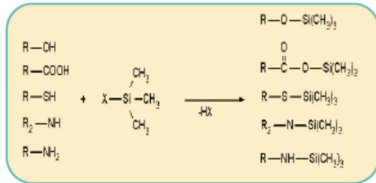
for the manual DLLME with extraction agents that have either lower or higher density than the solvent containing the analyte.

Derivatization

The use of derivatization agents offers the possibility to broaden the capabilities of chromatography. This applies particularly for gas chromatography (GC). For many analytes a derivatization is mandatory to enable a successful analysis by GC.

The derivatization improves the volatility of polar compounds and also the sensitivity is increased. In addition to highly pure single substances that have been optimised for the derivatization ISERA's assortment contains highly reactive mixtures and also test kits.

- Silylation
- Acylation
- Alkylation



HFBA

BSA

TMSI

Silyl-271

MSTFA

MBTFA

Silyl-991

BSTFA

TMSH

DMF-DMA

PFBC



Syringe Filters

The premium-quality membranes of *ISERA's syringe filters* guarantee the reliable separation of the sample solution from unwanted solid compounds. A broad range of membranes with different characteristics provide the right filter for almost every application.



The different membranes are set into an ultrasound-fused polypropylene housing. They can be used with a pressure of up to 7 bars. The filters have a Luer Lock inlet and a Luer Slip outlet. All filters can be provided with membranes that possess a pore size of 0.45 μm (clarification of samples) or a pore size of 0.2 μm (sterile filtration). Sterile and non-sterile filters are available.

Polyethersulfone

PVDF

Polypropylene

Regenerated cellulose

PTFE

Mixed cellulose ester

Polyamide

Cellulose acetate

Membrane diameter:

4 mm / 15 mm / 25 mm

Pore size:

0.2 μm / 0.45 μm

sterile / non-sterile

www.ISERA.de

We look forward to be at your disposal!

It will be our pleasure to support you in selecting the appropriate product you require for your sample preparation. Detailed information concerning the different product categories can be found on our website.



SPE with SERAbond

Derivatization reagents



Selection aid for syringe filters

Micro extraction with bilimex®



We offer customised solutions for your individual analytical problem as well. Also ask us for product samples.

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Filtration
Extraction
Concentration
Derivatization



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