

# Choosing Your SPE Solution

## COMPOUND OF INTEREST

### Water Soluble

### Organic Soluble

#### Non-Ionic

#### Ionic

#### Soluble in Non-Polar Solvent

#### Soluble in Moderately Polar Solvent

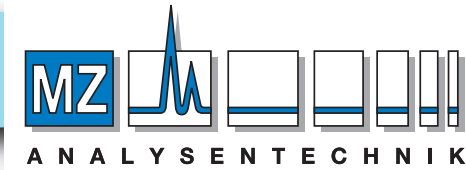
#### Soluble in Polar Solvent

#### Non-Polar

#### Moderately Polar

#### Polar

#### Anionic



**AUTHORIZED DISTRIBUTOR**  
 MZ-Analysentechnik GmbH, Barcelona-Allee 17 • D-55129 Mainz  
 Tel +49 6131 880 96-0, Fax +49 6131 880 96-20  
 e-mail: info@mz-at.de, www.mz-at.de

#### Moderately Polar

#### Polar

#### Reversed Phase

#### Normal Phase — Reversed Phase

#### Normal Phase

#### Anion Exchange

#### Cation Exchange

#### Reversed Phase

#### Normal Phase — Reversed Phase

#### Normal Phase

**HyperSep C18**  
**HyperSep C8**  
**HyperSep Phenyl**  
**HyperSep Retain PEP**

**HyperSep Silica**  
**HyperSep Florisil**

**HyperSep Cyano**  
**HyperSep Diol**  
**HyperSep Aminopropyl**

**HyperSep Verify-AX**  
**HyperSep SAX**  
**HyperSep Retain-AX**

**HyperSep Verify-CX**  
**HyperSep SCX**  
**HyperSep Retain-CX**

**HyperSep C18**  
**HyperSep C8**  
**HyperSep Phenyl**  
**HyperSep Retain PEP**

**HyperSep Silica**  
**HyperSep Florisil**

**HyperSep Cyano**  
**HyperSep Diol**  
**HyperSep Aminopropyl**  
**HyperSep Hypercarb**

## HyperSep SPE Phases

### Polymeric

**HyperSep Retain PEP**  
 Polystyrene divinylbenzene material surface modified with urea groups

**Applications include:**

- Drugs and metabolites in biological matrices
- Environmental samples
- Desalting of peptides in serum, plasma or biological fluids

**HyperSep Retain-AX**

Versatile polymeric material for retention of acidic compounds

**Application areas include the analysis of:**

- Acidic drugs of abuse from biological matrices (THC and its metabolites)

**HyperSep Retain-CX**

Versatile polymeric material for retention of basic compounds

**Typical application areas include the analysis of:**

- Drugs of abuse from biological matrices

**HyperSep Hypercarb**

Unique material for retention of highly polar compounds

**Applications include:**

- Retention and separation of highly polar species. Ideal for problem analytes in SPE applications

### Reversed Phase Silica Phases

**HyperSep C18**

Highly retentive alkyl-bonded silica phase for non-polar to moderately polar compounds

**Applications include:**

- Drugs and their metabolites in biological matrices
- Trace organics in environmental water samples
- Toxins in food samples

**HyperSep Phenyl**

Alternative selectivity for retention of basic compounds

**Applications include:**

- Benzodiazepines in biological matrices
- Extraction of aromatic compounds

**HyperSep C8**

Less retentive alternative to C18 for non-polar to moderately polar compounds

**Applications include:**

- Drugs and their metabolites in biological matrices
- Trace organics in environmental water samples
- Toxins in food samples

### Normal Phase Silica Phases

**HyperSep Silica**

A polar sorbent primarily used to retain analytes from non-polar matrices

**Application areas include extraction of:**

- Aldehydes
- Amines
- Pesticides
- Herbicides
- Carotenoids
- Fat soluble vitamins
- Aflatoxins
- Fatty acids
- Phospholipids

**HyperSep Cyano**

For retention of polar compounds from non-polar matrices

**Application areas include:**

- Retention of polar compounds from hexane and oil

**HyperSep Florisil**

Ideal for the isolation of polar compounds from non-polar matrices

**Applications include extraction of:**

- Pesticides using AOAC and EPA methods, as well as
- Polychlorinated biphenyls (PCBs) in transformer oil

**HyperSep Aminopropyl**

A polar sorbent for both polar and anion exchange interactions

**Applications include:**

- Petroleum fractionation
- Saccharides
- Drugs and drug metabolites

**HyperSep Diol**

For extraction of polar compounds

**Applications include:**

- Normal phase extraction
- Purification of polar compounds

### Ion Exchange Phases

**HyperSep SAX (Strong Anion Exchanger)**

Strong anion exchange sorbent for extraction of weak acids

**Application areas include extraction of:**

- Removal of acidic food pigments
- Removal of phenolic compounds
- Nucleic acids and surfactants

**HyperSep Verify-CX**

Non-polar and anionic characteristics for improved analysis of basic drugs of abuse

**Application areas include the analysis of:**

- Basic drugs of abuse from biological matrices

**HyperSep SCX (Strong Cation Exchanger)**

Strong cation exchange sorbent for extraction of charged basic compounds

**Application areas include extraction of:**

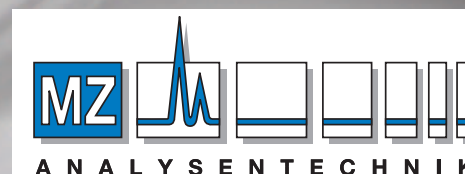
- Antibiotics
- Drugs
- Organic bases
- Amino acids
- Catecholamines
- Herbicides

**HyperSep Verify-AX**

Non-polar and cationic characteristics for improved analysis of acidic drugs of abuse

**Application areas include the analysis of:**

- Acidic drugs of abuse from biological matrices (THC and its metabolites)



**AUTHORIZED DISTRIBUTOR**  
 MZ-Analysentechnik GmbH, Barcelona-Allee 17 • D-55129 Mainz  
 Tel +49 6131 880 96-0, Fax +49 6131 880 96-20  
 e-mail: info@mz-at.de, www.mz-at.de

**Thermo**  
 SCIENTIFIC

Part of Thermo Fisher Scientific