

# Thermo Scientific HyperSep SPE

## Solid phase extraction columns and 96-well plates

- **Unique sorbents available for normal phase, reversed phase and ion exchange extractions**
- **Highly reproducible and efficient phases**
- **Versatile and rugged sample preparation**
- **Available for use in biological, pharmaceutical, forensic, toxicological and environmental applications**
- **Consistently high recoveries free from contaminants and impurities**



The manufacture of Thermo Scientific HyperSep™ sorbents ensures a controlled particle size distribution, providing reproducible flow characteristics and low backpressure for automation-friendly SPE columns. An even particle size distribution within the bed eliminates channeling, providing a larger surface area of sorbent available for interaction.

HyperSep solid phase extraction columns offer reproducible and reliable sample preparation in a traditional format. The polypropylene columns are chemically resistant. Two polyethylene frits are used to support the sorbent bed within the column. The columns are ideal for large samples and conform to industry standard configurations. HyperSep columns are available in a range of bed weights to suit a wide range of applications. Samples can be processed through the columns by vacuum, by positive pressure or by centrifugation.

The HyperSep-96™ system incorporates traditional solid phase extraction sorbents into 96-well plate format providing fast analysis without sacrificing accuracy or reproducibility. The innovative design of HyperSep-96 well plates provides flexibility for both method development and routine use. The HyperSep-96 format consists of individual removable wells for convenient method development and scale adjustment to 96-well without method revalidation. Well plates are customizable, allowing any arrangement of wells with differing sorbent chemistries for simultaneous processing.

HyperSep-96 products are available either in packs of 100 individual wells or in pre-assembled plates. Empty plates are also available, along with well sealing strips for partial plate processing. Wells can be processed using traditional SPE manifolds with the use of a simple adaptor.

Sorbent	Phase Description	Mean Particle Size (µm)	Mean Pore Size (Å)	Endcapped	Primary Retention Mechanisms
<b>Hypercarb™</b>	100% porous graphitic carbon, stable across the entire pH range	30	250	N/A	Hydrophobic reversed phase Normal phase adsorption Polar retention effect on graphite (PREG)
<b>Retain™ PEP</b>	Polar enhanced polymer, poly-divinyl benzene with urea functionality	30 - 50	70	No	Hydrophobic reversed phase and hydrophilic normal phase
<b>Retain-CX</b>	Polar enhanced polymer, poly-divinyl benzene partially functionalized with sulfonic acid	30 - 50	70	No	Hydrophobic reversed phase and cation exchange
<b>Retain-AX</b>	Polar enhanced polymer, poly-divinyl benzene partially functionalized with quaternary amine	30 - 50	70	No	Hydrophobic reversed phase and anion exchange
<b>C18</b>	Trifunctional octadecyl	40 - 60	60	No	Hydrophobic reversed phase
<b>C8</b>	Trifunctional octyl	40 - 60	60	No	Hydrophobic reversed phase
<b>Phenyl</b>	Trifunctional phenyl	40 - 60	60	No	Hydrophobic reversed phase
<b>Silica</b>	Unbonded activated silica	40 - 60	60	No	Hydrophilic normal phase
<b>SAX</b>	Trifunctional quaternary amine, 0.25 mEq/g, Cl <sup>-</sup> counter ion	40 - 60	60	No	Anion exchange
<b>SCX</b>	Trifunctional benzene sulfonic acid, 0.32 mEq/g, H <sup>+</sup> counter ion	40 - 60	60	No	Cation exchange
<b>Verify™-CX</b>	Mixed mode, containing C8 and benzene sulfonic acid	40 - 60	60	No	Cation exchange, non-polar
<b>Verify™-AX</b>	Mixed mode, containing C8 and quaternary amine	40 - 60	60	No	Anion exchange, non-polar
<b>Florisil™</b>	Florisil	40 - 60	N/A	No	Hydrophilic normal phase
<b>Aminopropyl</b>	Trifunctional aminopropyl, 0.31 mEq/g	40 - 60	60	No	Normal phase, weak anion exchange
<b>Cyano</b>	Trifunctional cyanopropyl	40 - 60	60	No	Polar (nonpolar organic matrix) or weak nonpolar (aqueous matrix)
<b>Diol</b>	Trifunctional diol	40 - 60	60	No	Polar