

# ISOLUTE® ENV+

## On-line SPE Cartridges

For Integrated Sample Preparation and Analysis



ISOLUTE® ENV+ has long been the sorbent of choice of solid phase extraction of polar organics from water samples, and is now available in on-line cartridge format.



ISOLUTE ENV+ is a high purity, hyper cross-linked polystyrene based polymeric sorbent with a hydroxylated surface, capable of extracting a wide range of polar, water soluble analytes from aqueous samples. Its high surface area and optimized pore structure make it ideal for extraction of very polar analytes, such as phenols and acid herbicides.

It has a very high capacity for polar compounds (up to 50% by weight for caffeine) reducing analyte breakthrough and improving recovery for even the most polar of compounds. ISOLUTE ENV+ is totally water wettable, so it will never become de-conditioned, even if it runs dry. Columns do not need to be stored in solvent after use.

Biotage ISOLUTE ENV+ On-line Cartridges combine these unique sorbent characteristics with the convenience of fully automated SPE.

### Typical Applications

- » Polar Organics
- » Acid Herbicides
- » Explosives
- » Phenols

#### ISOLUTE® ENV+ On-line SPE Cartridges

<b>Nominal Particle Size</b>	40 µm
<b>Pore Size</b>	800 Å
<b>Surface area</b>	1000 m <sup>2</sup> /g
<b>pH Stability</b>	1–14
<b>Recommended Flow Rates</b>	1–4 mL/min (typically 2–3 mL/min for loading, <1 mL/min during backflush/separation)
<b>Maximum Operating Pressure</b>	4000 psi

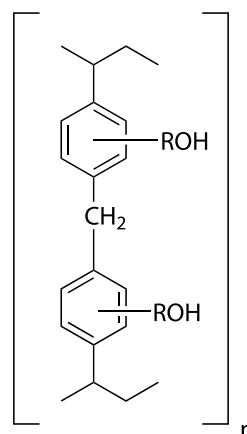


Figure 1. Structure of ISOLUTE® ENV+ sorbent.

## Recommended Starting Conditions

<b>SPE load mobile phase</b>	0–5% aq (v/v) acetonitrile with 0.1% formic acid
<b>SPE elution/transfer mobile phase</b>	5–100% aq (v/v) acetonitrile with 0.1% formic acid

## Ordering Information

Part Number	Description	Quantity
<b>OSPE-916-32150</b>	ISOLUTE® ENV+ On-line SPE cartridge 30 x 2.1 mm	1

## Method Development Hints and Tips

- » To increase recovery of acidic analytes, acidify the sample using formic acid or hydrochloric acid
- » To increase the recovery of basic analytes, add ammonium hydroxide to basify the sample
- » If sample has a high particulate content, consider filtration prior to extraction
- » ISOLUTE® ENV+ has a very high surface area and is extremely rugged. ISOLUTE ENV+ on-line SPE columns will maintain performance for >200 injections per cartridge (matrix dependent).

See technical note PPS424 for additional guidance on on-line SPE-LC-MS/MS method development.



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### Part Number: PPS422

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