

# EVOLUTE® CX

## IST Sample Preparation Products

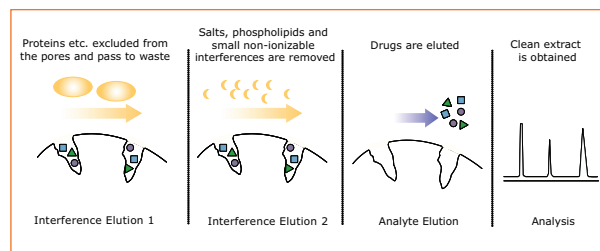


Figure 1. The combination of optimized pore structure and additional interference elution steps using mixed-mode sorbent chemistry guarantees extremely clean extracts.

## Mixed-mode Selectivity, Generic Methodology and Efficient Extraction

EVOLUTE® CX mixed-mode resin-based SPE sorbent extracts a wide range of basic analytes from biological fluids and other aqueous matrices using a generic procedure which minimizes method development time. EVOLUTE CX removes matrix components such as proteins, salts, non-ionizable interferences and phospholipids, delivering cleaner extracts with reproducible recoveries for accurate quantitation.

- Removal of proteins, salts, non-ionizable interferences and phospholipids
- Minimal ion suppression
- 3 times higher signal intensity in LC-MS/MS
- Fast, simple generic methodology
- High, reproducible recoveries for a wide range of basic drugs

EVOLUTE CX sample preparation products are available in a range of standard configurations.

### High selectivity provides ultra-clean extracts

The mixed-mode sorbent chemistry and optimized pore size minimizes retention of high molecular weight matrix components present in the biological fluid samples (Figure 1). The interferences including proteins, salts, non-ionizable molecules and phospholipids are removed during the interference elution step, thereby ensuring extremely clean extracts for LC-MS/MS analysis (Figures 2a and 2b).

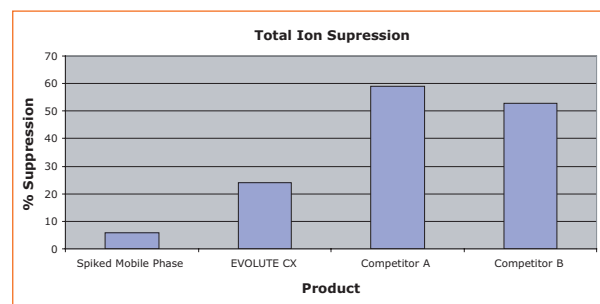


Figure 2a. Total ion suppression measured by FIA analysis. LC-MS/MS signal ( $m/z$  195>138) for spiked plasma, compared to spiked mobile phase. EVOLUTE gives 3 times higher s/n than other resin-based products.

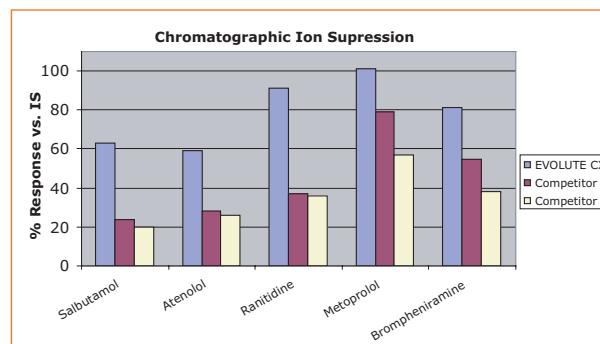


Figure 2b. Chromatographic ion suppression of five basic drugs. LC-MS/MS signal ( $m/z$  342>116) for spiked plasma compared to spiked mobile phase.

### Simple, fast method development

EVOLUTE CX uses a single generic methodology suitable for a wide range of basic drugs.



### High analyte recoveries

EVOLUTE CX has a water-wettable surface to promote robust, reliable sample preparation. The combination of robust polymer chemistry, uniform coverage of sulfonic acid (SO<sub>3</sub><sup>-</sup>) groups and optimum exchange capacity provide greater than 85% recovery for a wide range of basic drugs.

### Excellent flow characteristics

Narrow particle size distribution provides consistent flow characteristics for a variety of sample matrices. Optimized packing techniques eliminate channeling, which can lead to analyte breakthrough.

### Batch-to-batch reproducibility

The surface characteristics of each batch of EVOLUTE CX are quality controlled and tested to ensure consistency.

### Bioanalysis - EVOLUTE CX 30 µm

Biotage offers a range of EVOLUTE CX columns and 96-well plates optimised for bioanalytical sample preparation. Request Chemistry Data Sheet **TN 139** for more details.

### Forensic, clinical, food and environmental applications - EVOLUTE CX 50 µm

EVOLUTE CX is also available in larger SPE formats suitable for the larger sample volumes and more viscous matrices common in forensic, clinical, food and environmental applications. Request Chemistry Data Sheet **TN 141** for more details.

#### Ordering Information for EVOLUTE CX 30 µm columns and 96-well plates

Description	Quantity	Part number
<b>EVOLUTE CX Fixed Well Plate</b>		
EVOLUTE CX 10 mg Fixed Well Plate	1	601-0010-P01
EVOLUTE CX 25 mg Fixed Well Plate	1	601-0025-P01
<b>EVOLUTE CX Array Plates and Wells</b>		
EVOLUTE Array CX 10 mg/1 mL wells	100	601-0010-R
EVOLUTE Array CX 25 mg/1 mL wells	100	601-0025-R
Pre-assembled EVOLUTE Array plates are available. To order, add the suffix P to the equivalent loose well part number. e.g. 601-0010-RP.		
<b>EVOLUTE Array Accessories</b>		
EVOLUTE Array base plate	1	120-6000-P01
Strip of 8 base plate sealing plugs*	50	120-1200
Luer adaptors (fits standard sample processing manifold)	25	120-1201
Well removing tool*	1	120-1202
*Required when processing a partially populated EVOLUTE Array CX plate.		
<b>EVOLUTE CX 1 mL SPE Columns</b>		
EVOLUTE CX 10 mg/1 mL SPE Columns	100	601-0001-A
EVOLUTE CX 25 mg/1 mL SPE Columns	100	601-0002-A

#### Ordering Information for EVOLUTE CX 50 µm columns

Description	Quantity	Part number
<b>EVOLUTE CX SPE Columns</b>		
EVOLUTE CX 50 µm 50 mg/3 mL SPE Columns	50	611-0005-B
EVOLUTE CX 50 µm 100 mg/3 mL SPE Columns	50	611-0010-B
EVOLUTE CX 50 µm 100 mg/10 mL SPE Columns (H) <sup>1</sup>	50	611-0010-H
EVOLUTE CX 50 µm 200 mg/3 mL SPE Columns	50	611-0020-B
EVOLUTE CX 50 µm 200 mg/6 mL SPE Columns	30	611-0020-C
EVOLUTE CX 50 µm 500 mg/6 mL SPE Columns	30	611-0050-C

<sup>1</sup> 100 mg/10 mL (H) columns have the same sorbent bed dimensions as a 3 mL column, but with an extended reservoir for loading sample volumes up to 10 mL in one aliquot.

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