

Neutral OptiMS Capillary Cartridge

The Neutral OptiMS capillary cartridge is designed for use with the CESI 8000 Plus High Performance Separation Module for CESI-MS applications. Its hydrophilic neutral surface virtually eliminates electroosmotic flow, increasing the size of the separation window, helping resolve closely migrating protein isoforms. In addition, this surface minimizes interaction between analytes and the capillary wall, increasing overall sensitivity. The enhanced resolution combined with the superior sensitivity and reduced ion suppression of CESI-MS, help you see what you otherwise would be missing.

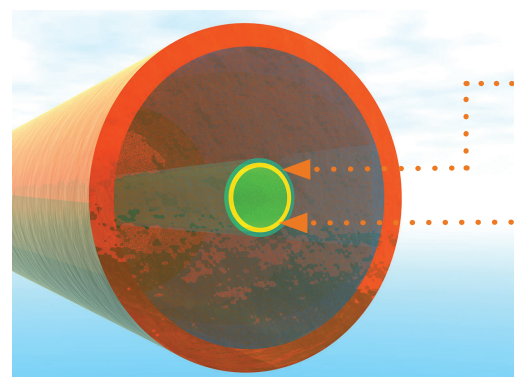
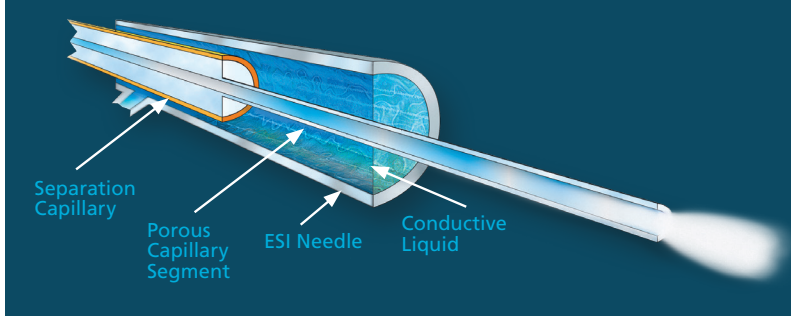
SCIEX's Neutral OptiMS technology delivers robust separation and mass spectrometry analysis of:

- Intact proteins, and protein mixtures
- Complex peptide digests
- Cationic and anionic metabolites in biofluids

CESI Sprayer Schematic

As mass spectrometry researchers sought to expand their range of detection and increase sensitivity, ultra low-flow separation was integrated with mass spectrometry using proprietary CESI-MS technology.

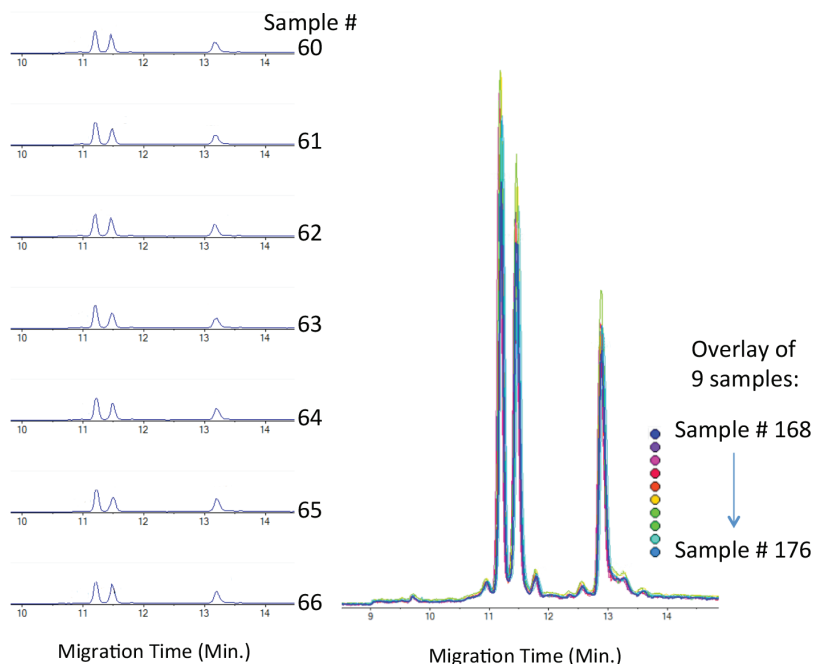
The neutral capillary version of the sprayer cartridge expands the separation window and allows for working with analytes that may interact with the bare fused-silica capillary model.



The Neutral Capillary interior has a binary layer coating:

- Hydrophobic Coating
 - Protects siloxanes from hydrolysis for increased longevity
- Hydrophilic polyacrylamide surface
 - Virtually eliminates electroosmotic flow, increasing the separation window
 - Inhibits protein interactions with the capillary wall increasing sensitivity
 - Significantly broaden the pH range from pH 2 to 9

Total ion electropherogram of the three protein mixture sample runs, consecutively analyzed over 6 days, 176 runs total on a single Neutral OptiMS Capillary Cartridge.



Neutral OptiMS CESI-MS data from repeat analysis of a three protein mixture sample

Sample consists of Cytochrome C, Lysozyme, and Ribonuclease B, shown as major peaks in the Total Ion Chromatograms eluting from left to right, respectively. A total of 176 runs of the same three-protein mixture sample was performed over 6 days on a single Neutral OptiMS Capillary Cartridge. Protein concentration used was 0.1 mg/mL for each protein, dissolved in 50 mM Ammonium Acetate, pH 3.0, with < 50 nL injected per analysis. The m/z range monitored was 400 to 3000.

Number of runs established on each cartridge is sample, BGE and condition dependent.

Additional CESI components & reagents:

- A98089 – CESI 8000 and CESI 8000 Plus High Performance Separation-ESI Modules
- B07363 – CESI adapter for Sciex Nanospray III
- B07366 – CESI adapter for Thermo Nano Spray II
- B07367 – Silica Surface OptiMS Cartridge
- B11648 – CESI Vials
- B24699 – CESI Vial Caps
- 144709 – Microvial
- 5043467 – nanoVial



B07368

Contains 1 OptiMS Cartridge with the pre-installed Neutral surface capillary

[Please follow the Instructional Guide prior to using the neutral capillary cartridge]

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