NEW! Fisher Chemical UHPLC-MS Solvents

Exceptionally pure mobile phase solvents for trace MS analysis of precursor (parent) ion and MS/MS analysis. The first solvents designed specifically to generate low background signal in order to increase signal to noise ratio using MS/MS detection, thus minimizing chromatographic interferences.

Fisher Chemical has developed a new solvent grade, UHPLC/MS Optima™, for mobile phases targeting trace analysis by UHPLC/MS. These ultra-pure solvents will provide a very low mass noise level in both positive and negative mode ionization, minimal metal ion content, and very low UHPLC/UV response using photo diode array detection.

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Pack size</th>
<th>Packaging</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>1L</td>
<td>Borosilicate Glass</td>
<td>A956-1</td>
</tr>
<tr>
<td>Methanol</td>
<td>1L</td>
<td>Borosilicate Glass</td>
<td>A458-1</td>
</tr>
<tr>
<td>Water</td>
<td>1L</td>
<td>Borosilicate Glass</td>
<td>W8-1</td>
</tr>
</tbody>
</table>

Why Fisher Chemical UHPLC-MS Optima™ Solvents?

- New solvent specification based on S/N ratio of the Propazine product ion from MS/MS fragmentation added with a full scale MS gradient specification (100-1500 amu).
  Benefit: The solvent quality of UHPLC-MS Optima™ solvents is linked directly to the sensitivity of the detector (mass spectrometer); unique specification for the chemical industry.
- 0.1 micron filtration for Acetonitrile and Methanol, 0.03 micron filtration for Water.
  Benefit: Submicron filtration reduces clogging of instrument, columns and check valves.
- Borosilicate glass significantly reduces the leaching of metal cations (Na+ and K+).
  Benefit: Low metal content in mobile phase solvents minimizes formation of metal ion adducts.
- Fisher Chemical UHPLC-MS solvents have an LC-UV Gradient Suitability specification which is tested in the full 200–400 nm range.
  Benefit: Mobile phase solvents have minimal UV-absorbing impurities providing researchers with smooth (uniform flat) baselines with minimal interference.
- Convenient 1L bottle design accommodates mobile phase bottle to sit easily on top of UHPLC-MS instrument.
  Benefit: Ease of use directly on instrument.

Did You Know

Ultra High Performance Liquid Chromatography (UHPLC) performs separations 5 to 10 times faster than conventional HPLC by employing sub-2 µm diameter particles? The 1-2 second peak widths and relatively high separation efficiency of UHPLC are more competitive with capillary GC, making UHPLC-MS an attractive method for illicit drug analysis.

**UHPLC-MS Optima™ solvents support interference-free analytical work**

**UHPLC-UV Gradient Suitability Test**

**UHPLC-UV Specification**

Peak height with PDA (200–400 nm) is < 2 mAU.

**Gradient - Water/Acetonitrile**

![Gradient chart](image)

**Absorption 200–400 nm**

![Absorption chart](image)
UHPLC-MS Gradient Suitability Test

**UHPLC-MS Specification:**

In positive mode ionization, any eluted peak height is < 25 ppb Propazine parent ion m/z 230 in full scale TIC and EIC.
UHPLC-MS/MS of 250 ppt Propazine

**UHPLC-MS/MS Specification:**

Signal-to-noise ratio of Propazine product ion peak m/z 188 is > 10.

**EIC of 250 ppt Propazine product ion m/z 188**

**MS/MS spectra m/z 188**