

# 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.

Solvent	Pack size	Packaging	Catalog Number
Acetonitrile	1L	Borosilicate Glass	A956-1
Methanol	1L	Borosilicate Glass	A458-1
Water	1L	Borosilicate Glass	W8-1



## 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<sup>+</sup> and K<sup>+</sup>).  
**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.

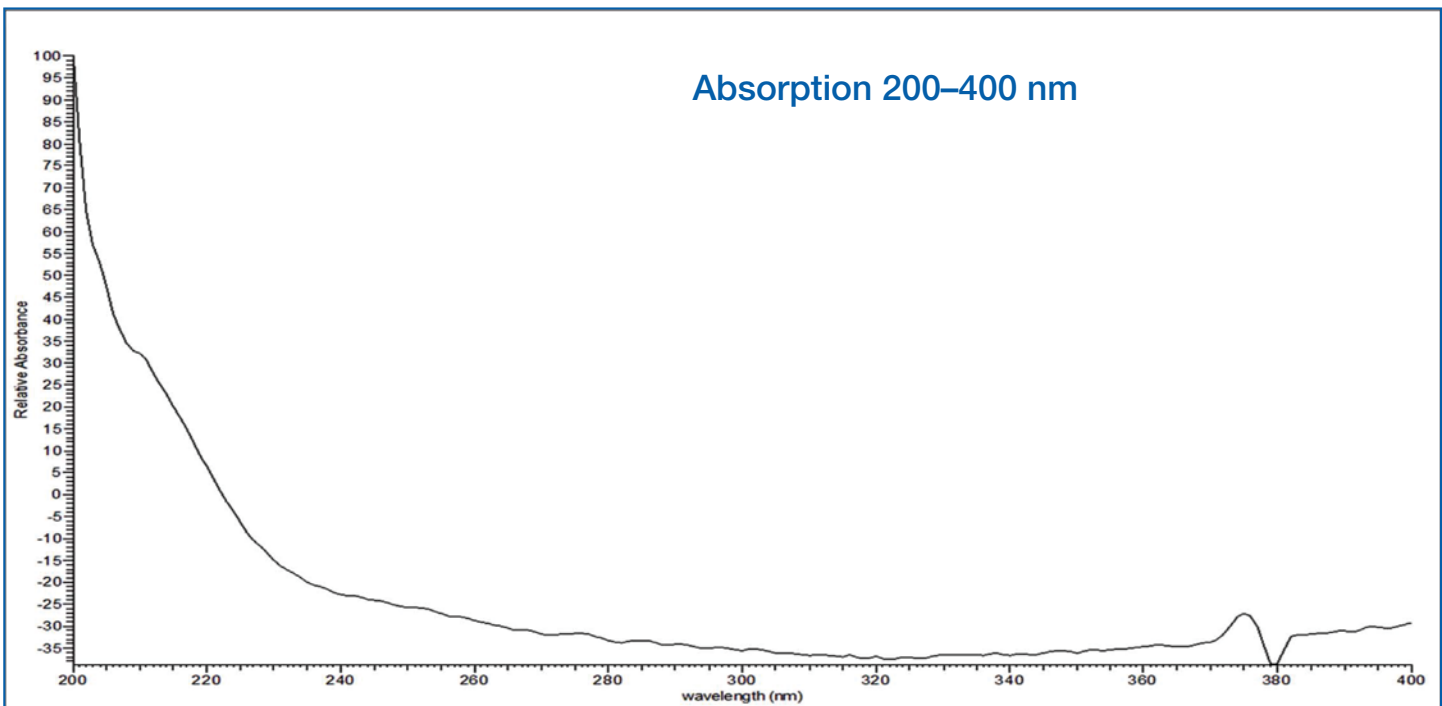
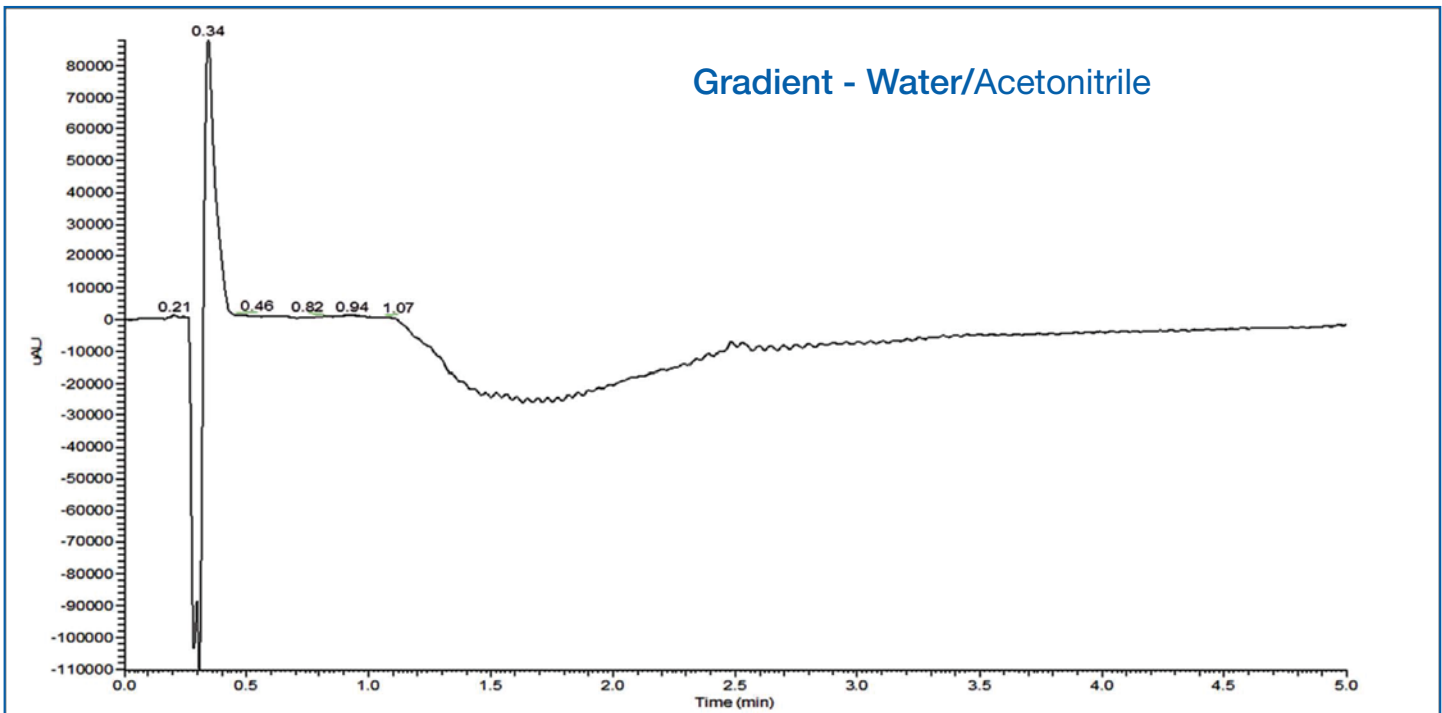
*Thermo Fisher Scientific Application Note 439: UHPLC/MS: An Efficient Tool for Determination of Illicit Drugs.*

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

## UHPLC-UV Gradient Suitability Test

### UHPLC-UV Specification

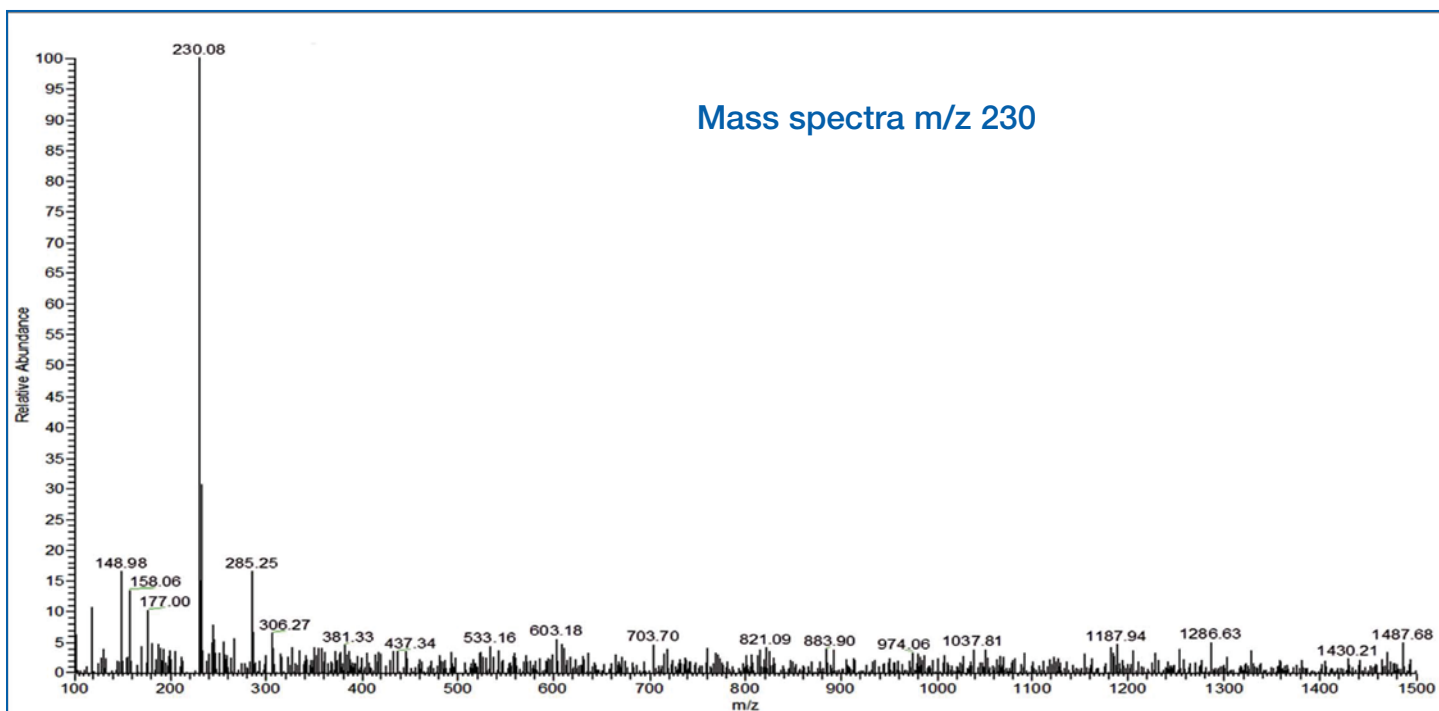
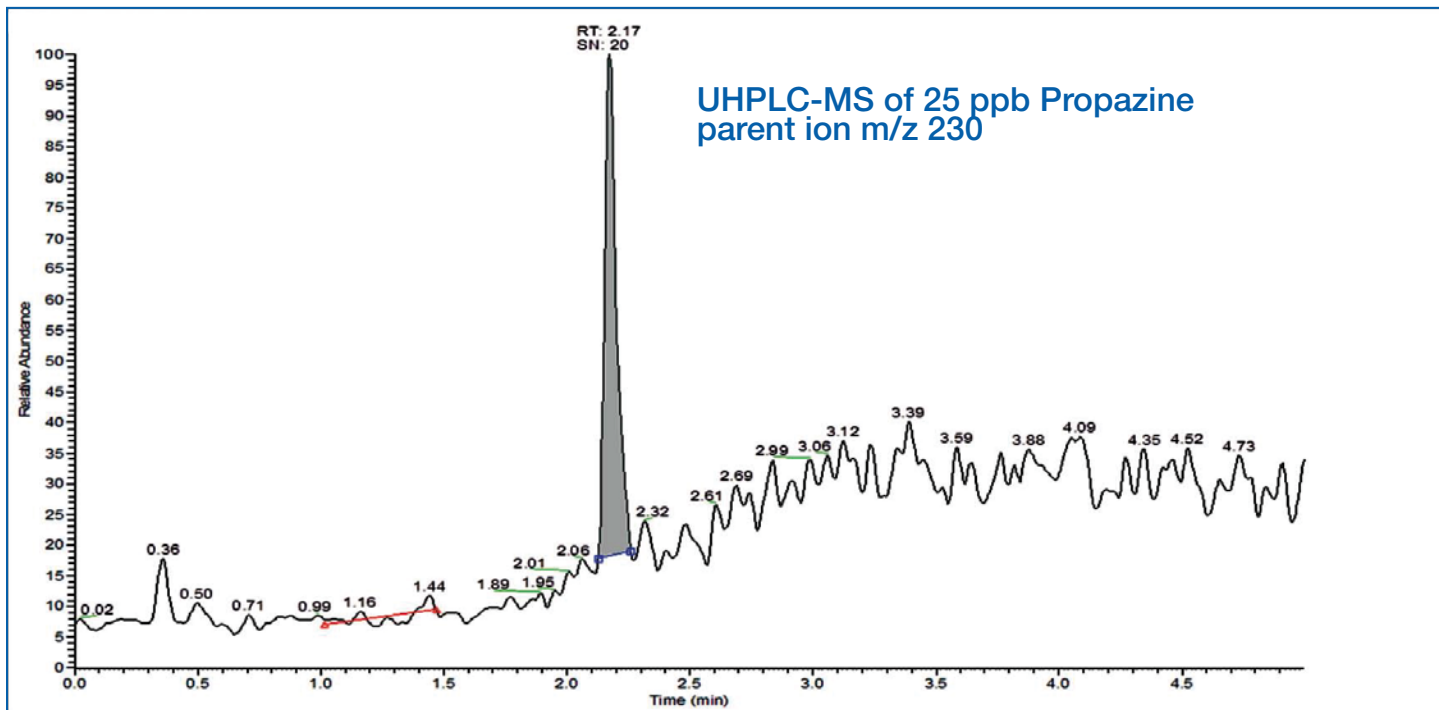
Peak height with PDA (200–400 nm) is < 2 mAU.



## UHPLC-MS Gradient Suitability Test

### UHPLC-MS Specification:

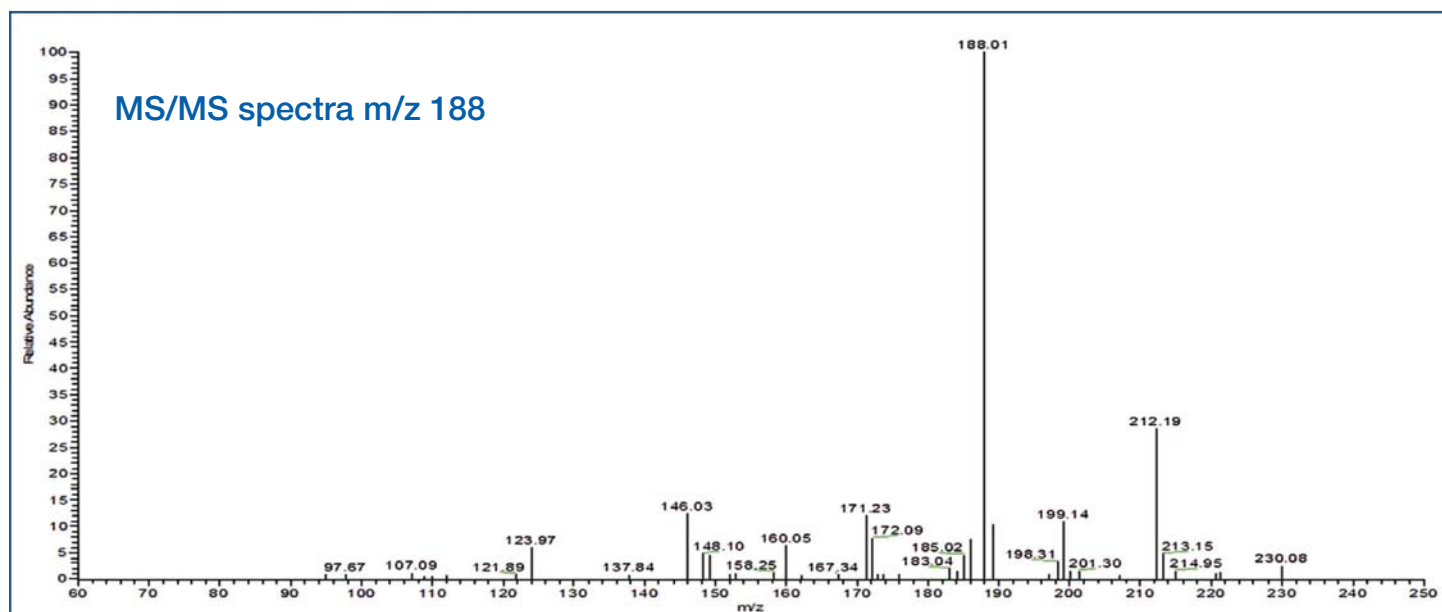
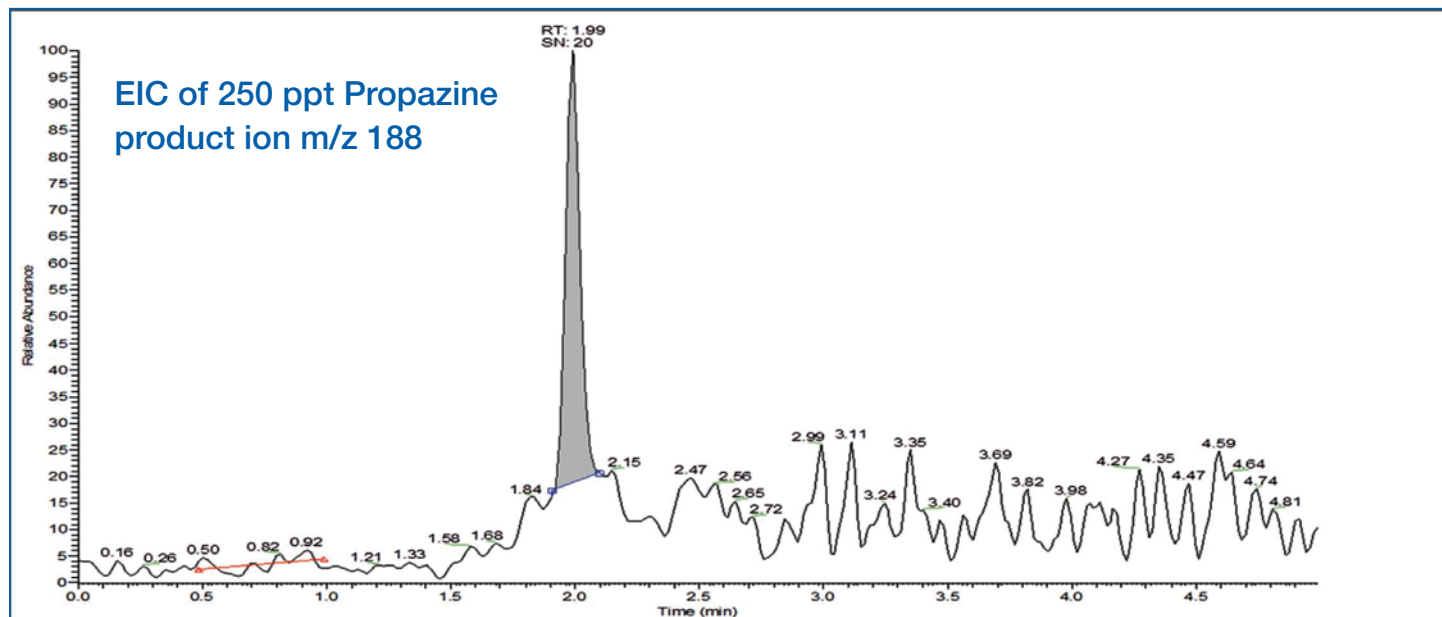
In positive mode ionization, any eluted peak height is < 25 ppb Propazine parent ion  $m/z$  230 in full scale TIC and EIC.



## UHPLC-MS/MS of 250 ppt Propazine

### UHPLC-MS/MS Specification:

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



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