PureSynth®
Research Chemicals GmbH

PurSolv Ultra LC-MS Solvents
PurChrom Ultra High-Purity Additives

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Enhance Impurity Profiling

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PurSolv Ultra LC-MS Solvents - Introduction

Liquid Chromatography–Mass Spectrometry (LC-MS) is now a routine fixture in today's advanced analytical laboratories. With its increasing use, researchers demand ever higher sensitivity, specificity, and speed.

Breakthroughs such as new ion sources, high-resolution LC systems, and rapid mass spectrometers with enhanced ion optics and detectors have dramatically lowered detection limits. But these advances also raise the **purity expectations** for solvents used in sample preparation, mobile phases, and post-column additives.

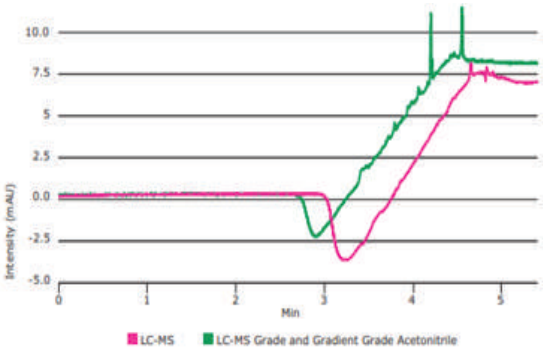
This is where **PurSolv Ultra** makes the difference.
Developed specifically for LC-MS applications, PurSolv Ultra solvents and additives deliver the exceptional purity, stability, and consistency required to keep pace with today's most demanding analyses.

Key Features and Benefits

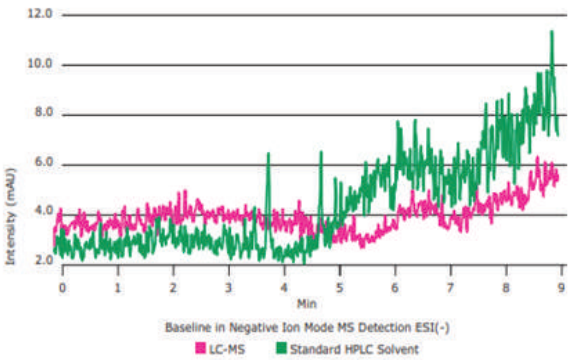
- Suitability tested by (+/- MS modes)
- Ultra-High Purity (≥99.9%)
- Batch-to-Batch Consistency
- Perfect for eluents, buffers, and mobile phase preparation.

Performance under Gradient Conditions

Using a gradient of acetonitrile in water, our new LC-MS grade solvents have extremely low total UV baseline drift compared to classical LC-MS grade and gradient grade acetonitrile. The drift is below 8 mAU at 210 nm for acetonitrile and the new grade has significantly lower baseline and fewer minor peaks



Blank gradient runs with standard reversed-phase HPLC methods (30–80% acetonitrile in water) typically produces stable baselines on columns packed with >3 µm particles. However, the combination of higher flow rates and shorter columns often leads to rising baselines when using conventional HPLC-grade solvents. Performance tests in ESI positive and negative ion modes clearly show that LC-MS grade solvents such as PurSolv Ultra provide consistently low and stable baselines, ensuring higher sensitivity and reliability compared to standard grades.



PurSolv Ultra Plus NEW

Product No.	Description	Cas No.	Packing
PSR49124	Acetonitrile PurSolv Ultra Plus for LCMS, tested for UHPLC-MS	75-05-8	1L, 2L
PSR49125	Methanol PurSolv Ultra Plus for LCMS, tested for UHPLC-MS	67-56-1	1L, 2L
PSR49126	Water PurSolv Ultra Plus for LCMS, tested for UHPLC-MS	7732-18-5	1L, 2L

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PurChrom Ultra LC-MS Additives - Introduction

In LC-MS, it is standard practice to add specific reagents to the mobile phase or introduce them post-column to influence ionization. These additives are primarily used to

- improve analyte signal intensity,
- suppress interfering signals, or
- selectively enhance the response of certain compounds—for example, glycosidic species in peptide mixtures.

To support high-quality analysis, we provide a broad range of **ultra-pure mobile phase additives** designed specifically for LC-MS. Our portfolio includes the most widely used acids, bases, and volatile salts, each tested for MS compatibility. Unlike lower-grade solvents that may contain alkali ions, plasticizers, or surfactants—which cause background noise and adduct formation—our ultrapure reagents ensure superior signal-to-noise ratios. The result is the highest sensitivity and reliability for both small-molecule and biopharmaceutical applications.

Key Features and Benefits

- LC-MS application tested for consistent quality
- Optimized to improve ionization and resolution
- Extremely low levels of inorganic and organic impurities
- Manufactured under controlled environment to ensure lower level of interfering Ions in LC-MS
- Highest quality acids, bases & salts - specified in the certificate of analysis

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Our Portfolio

- **High Purity Acids for LC-MS**
  Volatile, low molecular weight organic acids such as formic acid and acetic acid, as well as novel reagents like difluoroacetic acid (DFA), enhance ionization efficiency and improve resolution across a wide range of molecules. Adding organic acids to the mobile phase also helps counteract the ionization-suppressing effects of trifluoroacetic acid (TFA), often present in protein and peptide analysis.

- **High Purity Bases for LC-MS**
  Basic salts such as ammonium acetate and ammonium formate act as buffers to regulate the ionization state of analytes. Extensive usage of Ammonium & Sodium Salts for controlling the pH of mobile phase for LC-MS analysis is very essential to minimize the overall impurities in the analysis and complementing the use of high purity LC-MS solvents by ensuring lower level of interfering metal ions.

Extensive QC testing ensures highest specification

- Residue on ignition test – to show the low content of insoluble matter in the reagent needed for accurate measurement.
- The content of trace metals – to ensure complex forming ions in the low ppb range minimizing the risk of adduct formation for cleaner results.
- The reagents are supplied in amber glass bottles to avoid pthalate impurities.

PurSolv Ultra LC-MS Solvents

Product No.	Description	Cas No.	Packing
PSR36294	Acetonitrile PurSolv Ultra for LC-MS	75-05-8	1L, 2.5 L, 4 L
PSR43429	Butylamine, PurSolv Ultra for LC-MS >99%	109-73-9	100ML
PSR41419	Dichloromethane PurSolv Ultra for LC-MS (Stabilized with amylene), ≥99.5%	75-09-2	1L, 2.5 L
PSR46544	Ethyl acetate PurSolv Ultra for LC-MS, ≥99.7%	141-78-6	1L, 2.5 L
PSR2521	Ethyl acetate PurSolv Ultra for LC-MS, ≥99.5%	141-78-6	1L, 2.5 L
PSR36293	Methanol PurSolv Ultra for LC-MS	67-56-1	1L, 2.5 L, 4 L
PSR2764	n-Heptane PurSolv Ultra for LC-MS	142-82-5	1L
PSR36670	n-Hexane PurSolv Ultra for LC-MS	110-54-3	1L, 2.5 L
PSR36669	2-Propanol PurSolv Ultra for LC-MS	67-63-0	1L, 2.5 L
PSR37423	Tetrahydrofuran PurSolv Ultra for LCMS/Spectrophotometry (Inhibitor Free)	109-99-9	1 L
PSR50348	tert-Butyl methyl ether PurSolv Ultra for LC-MS, >99.5%	1634-04-4	2.5L
PSR44929	Toluene PurSolv Ultra for LC-MS	108-88-3	1L
PSR36665	Water PurSolv Ultra for LC-MS	7732-18-5	1L, 4L

PurChrom Ultra LC-MS Additives

Product No.	Description	Cas No.	Packing
PSR36297	Acetic acid PurChrom Ultra Eluent additive for LC-MS	64-19-7	50ML
PSR44945	Ammonium acetate PurChrom Ultra for LC-MS, Eluent additive for UHPLC-MS	631-61-8	25G, 100G
PSR38203	Ammonium bicarbonate PurChrom Ultra Eluent additive for LC-MS	1066-33-7	50G
PSR2040	Ammonium fluoride PurChrom Ultra Eluent additive for LC-MS	12125-01-8	50G
PSR36296	Ammonium formate PurChrom Ultra eluent additive for LC-MS	540-69-2	50G
PSR44790	Ammonium formate PurChrom Ultra eluent additive for UHPLC-MS	540-69-2	25G
PSR42116	Ammonium Trifluoroacetate PurChrom Ultra Eluent additive for LC-MS	3336-58-1	10G
PSR42321	EDTA tetrasodium salt Tetrahydrate Salt PurChrom Ultra eluent additive for LC-MS	13235-36-4	250G
PSR36652	Formic Acid PurChrom Ultra eluent additive for LC-MS	64-18-6	50ML, 1L
PSR50162	Formic acid PurChrom Ultra Eluent additive for LC-MS and UHPLC-MS	64-18-6	10ML
PSR2982	1,1,1,3,3,3-Hexafluoro-2-propanol PurChrom Ultra Eluent additive for LC-MS	920-66-1	50ML
PSR50609	Phenol PurChrom Ultra Eluent additive for LC-MS	108-95-2	500G
PSR2960	Propionic acid PurChrom Ultra Eluent additive for LC-MS	79-09-4	50ML
PSR47349	Phosphoric acid PurChrom Ultra Eluent additive for LC-MS	7664-38-2	500ML
PSR50274	Sodium Acetate PurChrom Ultra Eluent additive for LC-MS, ⩾ 99.0 %	127-09-3	50G
PSR36668	Triethylamine PurChrom Ultra Eluent additive for LC-MS	121-44-8	50ML
PSR36667	Trifluoroacetic acid PurChrom Ultra for LC-MS, Eluent additive for UHPLC-MS	76-05-1	50ML
PSR36288	Trifluoroacetic acid PurChrom Ultra Eluent additive for LC-MS	76-05-1	10*1ML, 10ML, 50ML, 1L
PSR3152	2,2,2-Trifluoroethanol PurChrom Ultra Eluent additive for LC-MS	75-89-8	50ML
PSR44989	Ammonium chloride PurChrom Ultra Eluent additive for LC-MS	12125-02-9	50G

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The Power of LC-MS — and the PurSolv Ultra Advantage

You rely on your LC-MS daily for more data at lower analyte levels. Downtime isn't an option, and neither is doubting results: "Real peak or artifact?" That's why solvent quality matters as much as instrument power.

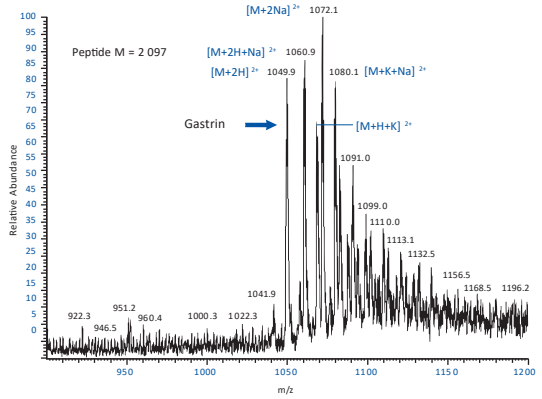
An LC-MS system is only as reliable as the chemistry flowing through it.

Impure solvents cause artifacts and unstable LC-MS baselines. Even trace particulates can clog columns, contaminate ion sources, damage components, and result in downtime, costly repairs, and unreliable data.

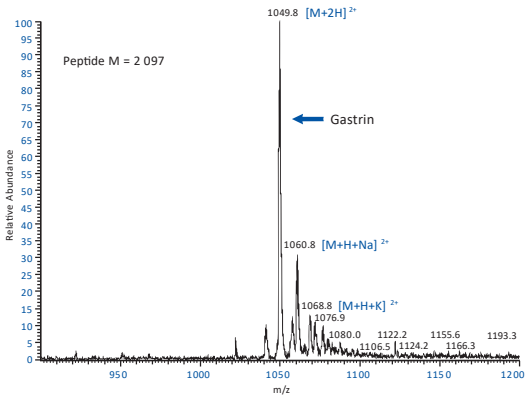
Can you risk facing these issues?

Of course not!

Make the change with PurSolv Ultra



Cluster ions arising from solvent impurities; interfering with sensitive LC-MS analysis



PurSolv Ultra is free from complex forming metal ions, giving clean, reproducible LC-MS results each time

- Ultra-high purity solvents with minimal contaminants
- Reduced noise and adducts, improving signal-to-noise ratios
- Reliable reproducibility
- Maximum instrument uptime with less wear and maintenance

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