

Honeywell Burdick & Jackson®

B&J Brand® LC-MS Grade Solvent

trust your analysis



Purified for LC-MS

Fully realizing the analytical potential of LC-MS instruments requires the use of highly purified and consistent solvents and mobile phase blends. Even trace ppb levels of impurities such as metals, chemical impurities and particulates can compromise the quality of your analysis. B&J Brand® LC-MS Grade Solvents are processed using our industry leading purification capabilities to remove these impurities, before undergoing extensive quality control to ensure that they meet our specifications. By producing a highly purified and consistent line of LC-MS grade solvents, we minimize variability, so that you can trust your analysis.

- Low solvent and metal impurities for reduced interference with delicate, minute or unknown samples.
- Trace metal specifications as low as 5 ppb max.
- Minimal organic and trace metal contamination, which results in higher ionization efficiency, lower adduct formation and easier data interpretation.
- Specifications for both positive mode (as reserpine and caffeine) and negative mode (as 4-nitrophenole) using Electrospray Ionization.
- Each product lot is LC-MS tested, in addition to undergoing as many as 27 different QC tests.

Packaged for LC-MS

Delivering a solvent capable of meeting LC-MS specifications requires the use of packaging designed to maintain product integrity and to minimize transfer contamination. Because B&J Brand® LC-MS Grade Solvents are packaged to maintain the integrity of the solvent from the time of manufacture to the point of use, you can trust your analysis.

- 1L and 2.5L glass bottles promote use of fresh solvent, minimizing waste due to shelf life issues.
- A cone shaped PTFE cap liner produces a superior environmental seal vs. the industry standard flat liner.
- B&J's 45mm wide mouth bottles connect directly to most LC-MS instruments using the standard, manufacturer supplied screw caps, limiting the potential for cross contamination.
- The 2.5L bottles have a smaller footprint than the industry standard 4L bottle, allowing for easy placement on top of instruments.
- Bottles are specially processed to minimize the introduction of particulates and surfactants into the solvent.

Understanding the caffeine specification

Manufacturers of high purity solvents have developed their solvents to meet a reserpine specification. With molecular weight of 608, reserpine is naturally more efficient at being ionized than lower molecular weight impurities that may be present in the solvent, such as amines and adducts. This "efficiency" has the effect of minimizing the number of charges available to competing low molecular weight impurity molecules, making them harder for the manufacturer's QA lab to detect.

Honeywell Burdick & Jackson developed its LC-MS Grade Solvents with an additional caffeine specification. With a molecular weight of only 194, caffeine ionizes less "efficiently" than reserpine, giving our QA labs better visibility to the presence of potential low molecular weight impurities.

Product Specifications

Solvent	Acetonitrile	Methanol	Water
Product Number	LC015	LC230	LC365
Filter	0.1 micron	n/a	0.2 micron
Water Content	<0.01%	<0.05%	
UV Cutoff	190 nm	205 nm	190 nm
Refractive Index (20° C)	1.3440 ± 0.0006	1.3284 ± 0.0004	1.3330 ± 0.0005
Residue	< one mg/L	< one mg/L	< one mg/L
Purity	99.9% min	99.9% min	
HPLC Gradient Elution	1 mAU @ 254 nm 5 mAU @ 215 nm	1 mAU @ 254 nm 5 mAU @ 220 nm	5 mAU @ 200 nm
LC-MS Positive Mode	50 ppb max as reserpine	50 ppb max as reserpine	50 ppb max as reserpine
LC-MS Positive Mode	100 ppb max as caffeine	100 ppb max as caffeine	100 ppb max as caffeine
LC-MS Negative Mode	50 ppb max as 4-nitrophenol	50 ppb max as 4-nitrophenol	50 ppb max as 4-nitrophenol
Fluorescence	0.3 ppb	0.3 ppb	0.3 ppb
Trace Metals: Ag, Ba, Cd, Co, Cr Cu, Fe, Mn, Ni, Pb, Sn	5 ppb max	5 ppb max	5 ppb max
K, Mg	10 ppb max	10 ppb max	10 ppb max
Al, Ca, Na	50 ppb max	50 ppb max	50 ppb max

Product Numbers and Packaging Options

DESCRIPTION	6x1L Case	4x2.5L Case
Acetonitrile	LC015-1	LC015-2.5
Methanol	LC230-1	LC230-2.5
Water	LC365-1	LC365-2.5
TFA 0.1% / Acetonitrile	LC407-1	LC407-2.5
TFA 0.1% / Water	LC485-1	LC485-2.5
Formic Acid 0.1% / Acetonitrile	LC441-1	LC441-2.5
Formic Acid 0.1% / Water	LC452-1	LC452-2.5
LC-MS Flush Solution	LC703-1	N/A

Custom packaging options available on request

Availability of technical data

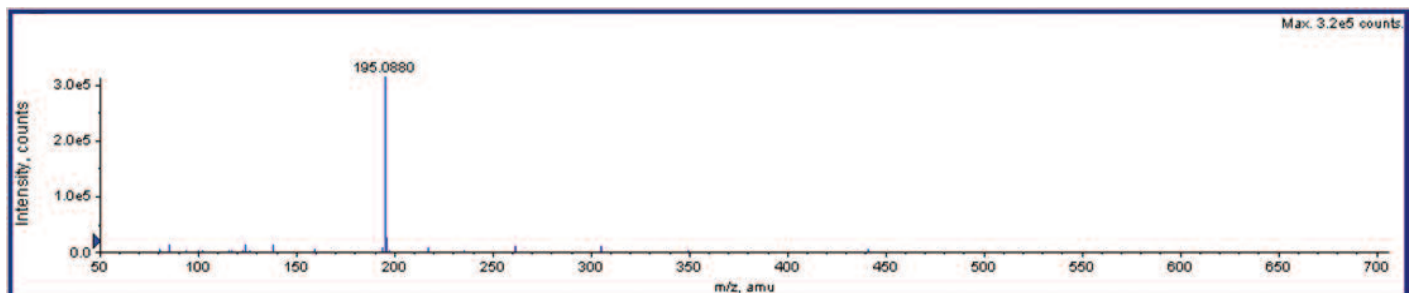
Honeywell Burdick & Jackson® conducts studies on solvent shelf life, stability and container compatibility to support the product integrity, consistency and reliability of B&J Brand LC-MS Grade Solvents.

Honeywell LabReady™ Blends	0.1% TFA in Acetonitrile (v/v)	0.1% TFA in Water (v/v)	0.1% Formic Acid in Acetonitrile (v/v)	0.1% Formic Acid in Water (v/v)
Product Number	LC407	LC485	LC441	LC452
% Acid Component	0.1 ± 0.01	0.1 ± 0.01	0.1 ± 0.01	0.1 ± 0.01
Residue	< one mg/L	< one mg/L	< one mg/L	< one mg/L
HPLC Gradient Elution	10 mAU @ 254 nm 20 mAU @ 215 nm	10 mAU @ 254 nm 20 mAU @ 215 nm	10 mAU @ 254 nm 20 mAU @ 215 nm	10 mAU @ 254 nm 20 mAU @ 215 nm
LC-MS Positive Mode	50 ppb max as reserpine	50 ppb max as reserpine	50 ppb max as reserpine	50 ppb max as reserpine
LC-MS Positive Mode	100 ppb max as caffeine	100 ppb max as caffeine	100 ppb max as caffeine	100 ppb max as caffeine
Trace Metals: Ag, Ba, Cd, Co, Cr Cu, Fe, Mn, Ni, Pb, Sn	50 ppb max	50 ppb max	50 ppb max	50 ppb max

Note: Ca and Na levels may increase with time due to leaching from the glass bottle.



Ion Chromatogram for Caffeine



The mass of the caffeine (caffeine + H⁺) species detected by the LC-MS is 195.