Honeywell | Research Chemicals

CHROMATOGRAPHY WORKFLOW SOLVENTS REAGENTS & STANDARDS

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ESSENTIAL FOR ANALYTICAL CHEMISTRY

Chromatography is an advanced technique used in analytical laboratories for separation and identification of complex mixtures.

These applications demand the highest standards for specificity, sensitivity, precision, and reliability.

Chromatography plays a critical role in the areas of pharmaceutical, chemical, food & beverage, and environmental analysis in testing raw ingredients, and detecting trace contaminants in final products. Moreover, the importance of chromatography in these fields is highlighted by the stringent regulations established by the U.S. Food and Drug Administration (FDA) and equivalent international organizations. For example, pharmaceutical companies are required to test the quality of their products prior to allowing them to enter into the global market.

Common chromatography methods include high-performance liquid chromatography (HPLC), liquid chromatography-mass spectrometry (LC-MS), and ultra-high-performance liquid chromatography (UHPLC). Liquid chromatography techniques are widely used in research & development, manufacturing and quality control of pharmaceutical and biological products.

Gas chromatography (GC), including gas chromatography-mass spectrometry (GC-MS) and GC headspace, is employed in analytical chemistry for the purpose of environmental monitoring, and is a common technique in the petrochemical and industrial chemical industries.

HONEYWELL PRODUCTS FOR CHROMATOGRAPHY

Low impurity, high consistency and accurate results

Honeywell Research Chemicals has over 200 years of expertise in analytical chemistry and more than 100 years of production experience with its Riedel-de Haën™ and Fluka™ brands. Our high-purity solvents and reagents are produced at ISO 9001-certified production plants in Germany and the USA.

With Honeywell chromatography products, you gain the confidence of high standards and optimal outcomes. Our solvents, ready-to-use and customizable solvent blends, eluent additives, and analytical standards enable laboratories to utilize high-quality products throughout the entire chromatography workflow to achieve:

- cleaner chromatograms through superior impurity profiles
- higher reproducibility through minimal lot-to-lot variation
- save time and cost with correct and reliable results the first time

Honeywell high-quality products are particularly advantageous for demanding applications such as LC-MS and UHPLC-MS, which rely on low baseline noise to achieve the required sensitivity.

Customers can choose from Honeywell Chromasolv™ and Burdick & Jackson™ solvents, Honeywell LabReady™ solvent blends in different chromatography grades and Fluka analytical standards and eluent additives.

HONEYWELL HIGH-PURITY SOLVENTS

Trusted brands

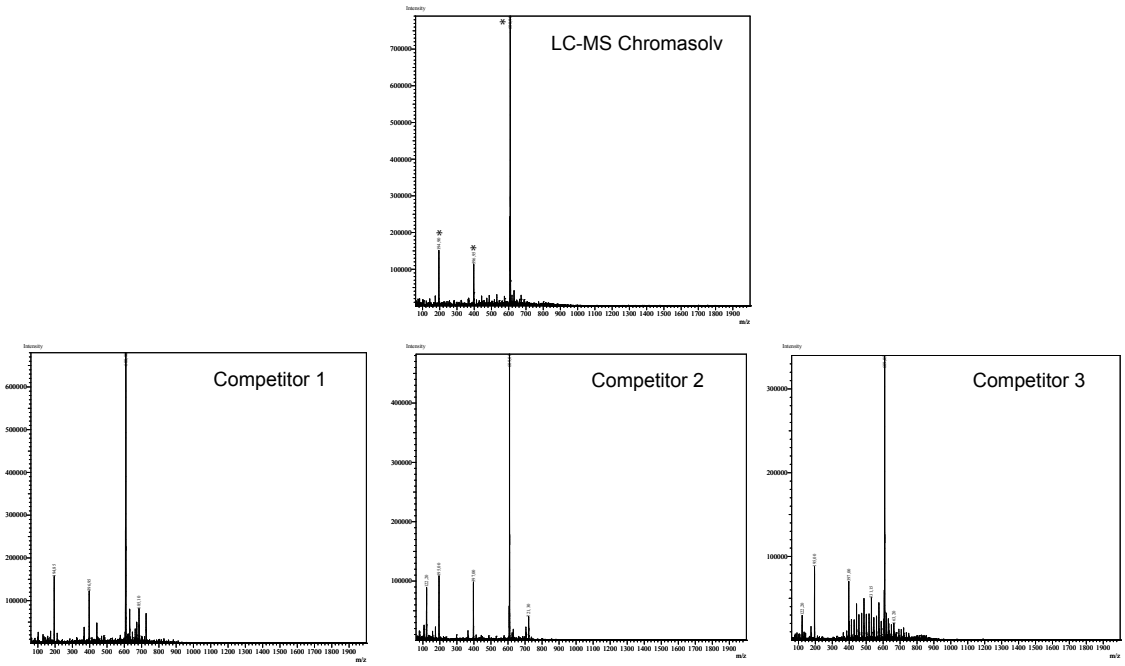
Because accuracy is non-negotiable, analytical laboratories around the globe trust Chromasolv and Burdick & Jackson solvents from Honeywell to provide accurate results. With more than 200 dedicated solvents and blends, expertly manufactured with the purity and consistency required for chromatography methods such as LC-MS, HPLC, and GC, we're committed to ensuring your analysis is in the safest hands.

Honeywell solvents, recognized for providing trusted results, have been developed to meet the requirements of specific analytical methods and are suitable for use in a diverse array of industries and applications.

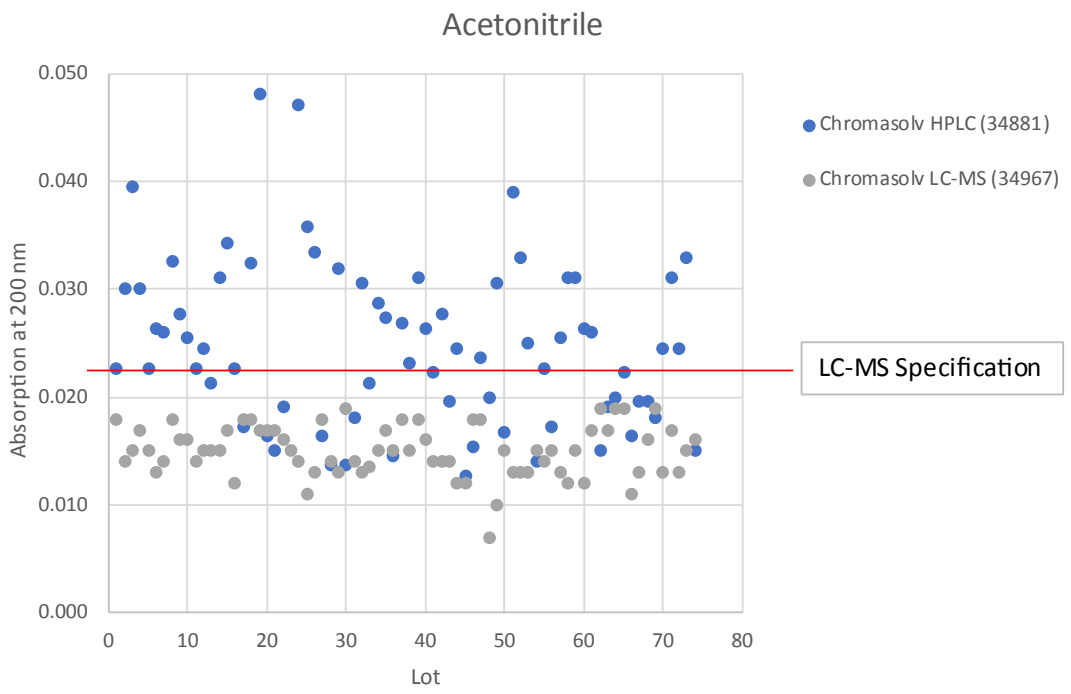
Product specifications are achieved through careful material selection and processing, along with stringent internal quality control systems. Honeywell's approach to high-purity products, reliability and environmental considerations is reflected by our ISO 9001 and RC 14001 certifications.

Consistently meeting the demanding requirements of these global standards for quality and environmental management demonstrates an uncompromising commitment to excellence in both areas.

Honeywell solvents are available in various bottle sizes from 100mL up to 4L and returnable containers from small scale up to 1000L for direct connection to chromatography instrumentation or setup in central storage locations with a solvent line to the lab.



The quality and purity of Acetonitrile Chromasolv LC-MS (34967) was evaluated against the comparable solvent from three leading global laboratory chemical suppliers using LC-MS. The ESI+-mass spectra shows that Chromasolv LC-MS acetontrile has a much better impurity profile than competitive products.



The lot-to-lot UV absorption (200 nm) variations for Acetonitrile Chromasolv LC-MS (grey) was significantly lower compared to the Chromasolv HPLC (blue) grade. This underscores the importance of choosing the right solvent quality to support the analytical task at hand. Relying on lower grade solvents, especially during method development, may lower the apparent cost per sample, but has a serious negative impact on Limit of Quantification (LOQ) while also negatively affecting the lifetime of the instrument.

For detailed results, read our whitepaper on Comparing the Leading Solvents, based on internal and third party lab studies. Available on lab.honeywell.com.

SOLVENTS FOR CHROMATOGRAPHY.

METHOD	CHROMATOGRAPHY TYPE	BRAND	QUALITY GRADE	FEATURES AND BENEFITS
Liquid Chromatography	Preparative LC	Burdick & Jackson™	B&J Purified Plus™	• Developed for organic synthesis and for preparative LC
	Isocratic HPLC	Chromasolv™	HPLC	• High-purity, multipurpose solvents • High lot-to-lot consistency
		Burdick & Jackson™	B&J Brand™	• Multi purpose solvents for LC and GC, spectrophotometry, pesticide residue analysis, organic synthesis and combinatorial chemistry • Minimal UV contaminants • Low water content • Outstanding lot-to-lot consistency
			ACS Reagent, for HPLC	• Tested for HPLC and spectrophotometry applications • Meets analytical specification of USP
	Gradient HPLC	Chromasolv™	Gradient grade	• Same high quality as Chromasolv HPLC • Additional testing for HPLC via gradient analysis and UV-VIS spectroscopy • Low UV profile by HPLC • Low impurity gradient LC baseline
			HPLC Plus	• Tested for HPLC suitability via gradient analysis and UV-VIS spectroscopy • Low UV impurity profile • Low impurity gradient LC baseline • Very low levels of non-volatile impurities
		Burdick & Jackson™	ACS Reagent, for HPLC	• Tested for HPLC and spectrophotometry applications • Meets analytical specification of USP"
			B&J Brand™	• Multi purpose solvents for LC and GC, spectrophotometry, pesticide residue analysis, organic synthesis and combinatorial chemistry • Minimal UV contaminants • Low water content • Outstanding lot-to-lot consistency
	LC-MS	Burdick & Jackson™	LC-MS	• Developed for HPLC and LC-MS applications • Meeting the extreme purity demands of MS applications
		Chromasolv™	LC-MS	• Tested for LC-MS suitability • HPLC / UV-VIS quality control • Low gradient baseline drift • Low levels of alkali metal impurities • Very low levels of non-volatile impurities
	UHPLC and UHPLC-MS	Chromasolv™	LC-MS Ultra	• Tested for UHPLC-MS suitability • Highest solvent purity for low detection limits and extremely low MS baseline noise • Exemplary lot-to-lot reproducibility • Extremely low levels of alkali metal impurities
Gas Chromatography	GC	Chromasolv™	Residue analysis of pesticides	• Suitability tested for pesticide and other low-volatile substances using GC • Non-volatile matter and water content are specified for each solvent
			Residual analysis of dioxins, furans and PCB	• Suitability tested for analysis of dioxins, furans and PCB • GC-MS application tested "
		Burdick & Jackson™	B&J Brand™	• Premier multi purpose solvents for GC, spectrophotometry, pesticide residue analysis, organic synthesis and combinatorial chemistry • Minimal UV contaminants • Low water content • Outstanding lot-to-lot consistency"
			B&J GC2 ™	• Offers an extensive selection of solvents for environmental analysis including pesticide residue analysis, such as capillary gas chromatography applications • Suited for trace analysis at or below the part-per-billion level • Ideal for EPA protocols"
	GC headspace	Chromasolv™	GC headspace	• Meets USP, Ph. Eur. and ICH requirements • GC headspace application tested"

HONEYWELL LABREADY™ BLENDS

Make your lab more productive

Honeywell uses its high-purity Chromasolv and Burdick & Jackson solvents to prepare standard solvent blends available as off-the-shelf products and as customizable blends produced to your needs and precise specifications. All of our blends are made using a proprietary closed loop precision apparatus, with high purity and consistent products, assuring you reproducible and accurate results, lot after lot. By eliminating manual blending, your laboratory can redeploy resources to more value-added activities. You also benefit from a reduction in waste, which results from formulation errors, and a safer work environment due to limited chemical handling.

Typical blends include mixtures of different solvents; solvents with acids, bases or salts; and pH-adjusted buffers for applications such as HPLC, LC-MC and UHPLC.

FLUKA™ ANALYTICAL STANDARDS

Advance your analysis for greater confidence

Honeywell Fluka™ analytical standards include an expanding portfolio of high-quality organic reference materials, produced according to ISO 9001 and suitable for a wide range of industries and applications. Every vial comes complete with a printed certificate of analysis (CoA) and is eligible for free expert technical support—ensuring you have the information needed to quickly start your analysis and pass relevant audits.

Each CoA includes:

1. Contact and technical support details
2. Expiry date
3. Product number, name and batch
4. General product information
5. Lot specific analytical results
6. Purity test by HPLC, GC, LC-MS, GC-MS and Titration
7. Identity test by NMR, FT-IR or Mass Spectrometry

Limit expensive delays

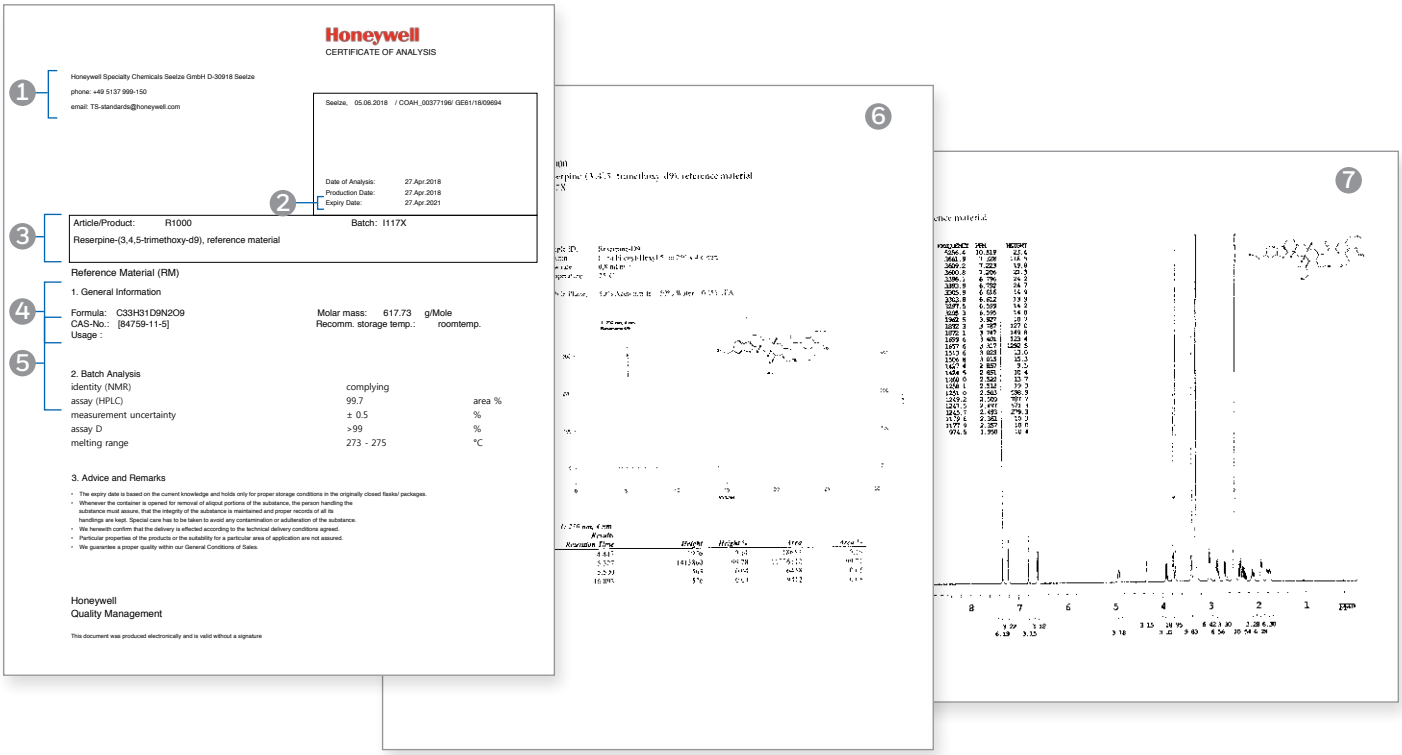
If you have a critical question not addressed by our documentation, Honeywell provides fast technical support from experts who have been developing, producing and testing standards for decades, ensuring you get timely and effective answers to even the trickiest application questions.

Save valuable lab time

Producing a standard in-house can be a technically challenging, time-consuming and expensive process, requiring you to source materials and then purify and validate your standard. Our extensive experience enables us to efficiently produce and test standards tailor-made to your requirements in a cost-effective manner.

Rely on experts

With the Fluka standards manufacturing facility and technical experts located at a single site, Honeywell can develop, test and manufacture a simple or complex custom standard to meet your needs. Because our custom standards are guaranteed to comply with all specifications and come with full documentation, you can be sure your analysis is reliable and accurate.


Honeywell
CERTIFICATE OF ANALYSIS

1 Honeywell Specialty Chemicals Seelze GmbH D-30918 Seelze
phone: +49 5137 999-150
email: TS-standards@honeywell.com

Seelze, 05.06.2018 / COAH_00377196/ GE61/18/09694

2 Date of Analysis: 27.Apr.2018
Production Date: 27.Apr.2018
Expiry Date: 27.Apr.2021

3 Article/Product: R1000 Batch: I117X
Reserpine-(3,4,5-trimethoxy-d9), reference material

Reference Material (RM)

4 1. General Information
Formula: C33H31D9N2O9 Molar mass: 617.73 g/Mole
CAS-No.: [84759-11-5] Recomm. storage temp.: roomtemp.
Usage :

5 2. Batch Analysis

identity (NMR)	complying	
assay (HPLC)	99.7	area %
measurement uncertainty	± 0.5	%
assay D	>99	%
melting range	273 - 275	°C

3. Advice and Remarks

- The expiry date is based on the current knowledge and holds only for proper storage conditions in the originally closed flasks/ packages.
- Whenever the container is opened for removal of aliquot portions of the substance, the person handling the substance must assure, that the integrity of the substance is maintained and proper records of all its handlings are kept. Special care has to be taken to avoid any contamination or adulteration of the substance.
- We herewith confirm that the delivery is effected according to the technical delivery conditions agreed.
- Particular properties of the products or the suitability for a particular area of application are not assured.
- We guarantee a proper quality within our General Conditions of Sales.

Honeywell
Quality Management

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FLUKA ELUENT ADDITIVES

Ensure the robustness of your analytical technique

Eluent additives enable analytical labs to optimize the performance of chromatography applications. They are used to adjust eluent pH to improve the robustness of the method regarding retention times and selectivity, improve the analyte signal or suppress unwanted signals. Extensive quality control ensures the highest specifications are met. Honeywell offers a wide range of high-purity eluent additives for HPLC, LC-MS and UHPLC applications.

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OUR COMMITMENT TO SUSTAINABILITY

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BNBN20201601