MERCK

At any stage of your process... We can support you!

Individual products and tailor-made chemicals for your pharmaceutical application

The life science business of Merck operates as MilliporeSigma in the U.S. and Canada.

Supelco®
Analytical Products

vwr™ part of avantor | order on VWR.COM

WHO WE ARE

Our Life Science business delivers many of the most highly-respected brands in the industry. Our offering covers every step of the production chain, creating a complete end-to-end workflow. Our innovative portfolio and industry leading capabilities, uniquely positions us to anticipate and deliver your needs.

AND WHAT DRIVES US

Today, delivering potential new medicines is more challenging and complex than ever. As a partner and supplier to Pharmaceutical customers, we have a strong understanding of market trends and challenges, the needs of our specific customer personas, and the ability to develop and deliver new solutions and products that make a difference. By moving from tactical to strategic planning, focusing on therapeutic areas, customer segments and innovation we are supporting the unique needs of our customers.

Table of contents

BIOshell™ UHPLC and HPLC Columns

Maximum Resolution for Biomolecules

BIOshell™ UHPLC and HPLC columns deliver maximum speed and efficiency for the separation of biomolecules on both UHPLC and HPLC systems. The Fused-Core® superficially porous silica particles (SPP) with pore sizes from 90 A up to 1000 A allows superior separation of glycans as well as very large proteins. In particular, a pore size of 1000 A shows very clear advantages over common 300 A pores for the separation of very large proteins in biotherapeutic drug development such as monoclonal antibodies (mAbs) or proteins with molecular weights greater than 100 kDa.

Your benefits:

- Fast and efficient separation of biomolecules
- Advanced Fused-Core Technology
- 4 different particle sizes for HPLC and UHPLC use
- Pore sizes from 90 A up to 1000 A allows superior separation of glycans as well as very large proteins

Product Description	Particle size	Column length	Column ID	Cat. No.
BIOshell™ A160 Peptide C18 HPLC column	2.7 µm	50 mm	2.1 mm	**66902-U**
BIOshell™ A160 Peptide C18 HPLC column	2.7 µm	100 mm	2.1 mm	**66904-U**
BIOshell™ A160 Peptide C18 HPLC column	2.7 µm	50 mm	4.6 mm	**66913-U**
BIOshell™ A160 Peptide C18 HPLC column	2.7 µm	100 mm	4.6 mm	**66915-U**
BIOshell™ IgG 1000Å C4 HPLC column	2.7 µm	50 mm	2.1 mm	**63283-U**
BIOshell™ IgG 1000Å C4 HPLC column	2.7 µm	100 mm	2.1 mm	**63288-U**
BIOshell™ IgG 1000Å C4 HPLC column	2.7 µm	50 mm	4.6 mm	**63325-U**
BIOshell™ IgG 1000Å C4 HPLC column	2.7 µm	100 mm	4.6 mm	**63328-U**

Ascentis® Express UHPLC and HPLC Columns

Designed to Deliver Speed and Resolution

The Fused-Core® technology behind our Ascentis® Express columns delivers maximum speed and efficiency on both UHPLC and HPLC systems. Fused-Core® particles provide a much shorter diffusion path compared to totally porous particles, minimizing peak broadening. This result in very high efficiencies, which are typically 40% higher in comparison to fully porous particles of the same size. Ascentis® Express column are available with 2, 2.7 and 5µm particles and with a very broad range of column chemistries.

Your benefits:

- Maximize speed with sharp peaks and outstanding separation efficiency
- 3 different particles sizes 2.0, 2.7, and 5.0 µm for UHPLC, HPLC and LC/MS use
- Very broad range of column chemistries for best selectivity
- 40% higher separation efficiency in comparison to fully porous particles of the same size

Product Description	Particle size	Column length	Column ID	Cat. No.
Ascentis® Express C18 HPLC Column (600 bar)	2.7 µm	100 mm	2.1 mm	**53823-U**
Ascentis® Express C18 HPLC Column (600 bar)	2.7 µm	100 mm	4.6 mm	**53827-U**
Ascentis® Express C18 HPLC Column (600 bar)	2.7 µm	150 mm	2.1 mm	**53825-U**
Ascentis® Express C18 HPLC Column (600 bar)	2.7 µm	150 mm	4.6 mm	**53829-U**
Ascentis® Express C18 UHPLC Column (1000 bar)	2.0 µm	50 mm	2.1 mm	**50811-U**
Ascentis® Express C18 UHPLC Column (1000 bar)	2.0 µm	75 mm	2.1 mm	**50812-U**
Ascentis® Express C18 UHPLC Column (1000 bar)	2.0 µm	100 mm	2.1 mm	**50813-U**
Ascentis® Express Phenyl-Hexyl HPLC Column (600 bar)	2.7 µm	100 mm	2.1 mm	**53336-U**
Ascentis® Express Phenyl-Hexyl HPLC Column (600 bar)	2.7 µm	100 mm	4.6 mm	**53352-U**
Ascentis® Express Phenyl-Hexyl HPLC Column (600 bar)	2.7 µm	150 mm	2.1 mm	**53338-U**
Ascentis® Express Phenyl-Hexyl HPLC Column (600 bar)	2.7 µm	150 mm	4.6 mm	**53353-U**
Ascentis® Express Phenyl-Hexyl UHPLC Column (1000 bar)	2.0 µm	50 mm	2.1 mm	**51603-U**
Ascentis® Express Phenyl-Hexyl UHPLC Column (1000 bar)	2.0 µm	75 mm	2.1 mm	**51605-U**
Ascentis® Express Phenyl-Hexyl UHPLC Column (1000 bar)	2.0 µm	100 mm	2.1 mm	**51608-U**

Further products are available depending on your needs

Please contact your local VWR organization for more information or have a look at our brochures:

BIOshell™ Fused-Core™ Columns

Faster Separation of Proteins, Peptides, and Glycans

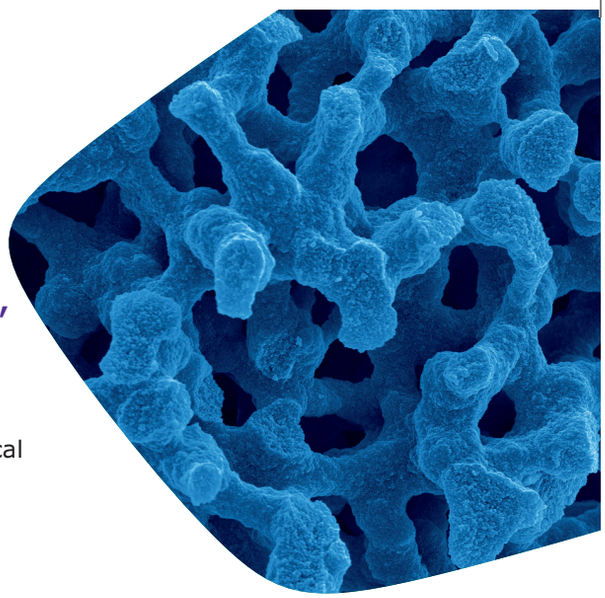
(PB1283ENEU)

What if the Unseen Were Seen?

Let's Create Accuracy in Forensic Testing. Together.

(MK_BR2472EN)

Chromolith® WidePore 300 HPLC Columns



Analytical Chromolith® columns for Bio applications, 300Å mesopores: RP-18, RP-8, RP-4, Prot-A, Epoxy

Biotherapeutics such as bio-engineered drugs, peptide therapeutics, and the complete field of biotechnology represents the promise of new medical treatments for the new millennium.

The development of biological entities is strongly increasing because biotechnological processes now enable a production with reasonable costs. This implies a demand of suitable analytical methods for process monitoring and quality control of biomolecules with therapeutic purposes. Especially the HPLC is the mostly used analysis method. Most important for the HPLC analysis are the properties of the column. For bigger peptides, like proteins or antibodies a new type of columns is needed which provide a good permeability, better mass transfer and a better selectivity. As the rule of thumb it is widely accepted, that in order for the separated molecules not to be influenced by size exclusion process the pore should be at least 10 times bigger than the molecule. Therefore about 100 kDa molecule would require around 300 A pores.

Chromolith® columns have already shown great potential and superiority compared to standard silica particles. Wide pore (300 A) monolithic silica columns are made of a single continuous rod of high purity porous silica that is then bonded with C18, C8, C4 or Protein A. Monolithic columns remove backpressure as the primary consideration in method development and give back the flexibility of choices in flow rates for much higher throughput, column lengths for superior resolution, and solvent choices for optimum selectivities.

Product Description	Content	Cat. No.
Chromolith® guard cartridge holder bioinert 10-4.6	1 unit	**1.52255.0001**
Chromolith® guard cartridge holder bioinert 5-4.6	1 unit	**1.52256.0001**
Chromolith® WP 300 Epoxy 100-4.6 HPLC column	1 unit	**1.52250.0001**
Chromolith® WP 300 Epoxy 10-4.6 guard cartridges	3 units	**1.52253.0001**
Chromolith® WP 300 Epoxy 25-4.6 HPLC column	1 unit	**1.52252.0001**
Chromolith® WP 300 Epoxy 50-4.6 HPLC column	1 unit	**1.52251.0001**
Chromolith® WP 300 Epoxy 5-4.6 guard cartridges	3 units	**1.52254.0001**
Chromolith® WP 300 Protein A 25-4.6 HPLC column	1 unit	**1.52258.0001**
Chromolith® WP 300 RP-18 100-4.6 HPLC column	1 unit	**1.52270.0001**
Chromolith® WP 300 RP-18 10-4.6 guard cartridges	3 units	**1.52272.0001**
Chromolith® WP 300 RP-18 50-4.6 HPLC column	1 unit	**1.52271.0001**
Chromolith® WP 300 RP-18 5-4.6 guard cartridges	3 units	**1.52273.0001**
Chromolith® WP 300 RP-4 100-4.6 HPLC column	1 unit	**1.52260.0001**
Chromolith® WP 300 RP-4 10-4.6 guard cartridge	3 units	**1.52262.0001**
Chromolith® WP 300 RP-4 50-4.6 HPLC column	1 unit	**1.52261.0001**
Chromolith® WP 300 RP-4 5-4.6 guard cartridge	3 units	**1.52263.0001**
Chromolith® WP 300 RP-8 100-4.6 HPLC column	1 unit	**1.52265.0001**
Chromolith® WP 300 RP-8 10-4.6 guard cartridges	3 units	**1.52267.0001**
Chromolith® WP 300 RP-8 50-4.6 HPLC column	1 unit	**1.52266.0001**
Chromolith® WP 300 RP-8 5-4.6 guard cartridges	3 units	**1.52268.0001**

Your benefits:

- Completely bioinert column hardware
- High biorecovery
- Selectivity for a range of biomolecules
- Very low column backpressure
- High-speed separation possible
- Longer column lifetime
- High resistance to column blockage
- Cost savings from higher sample throughput and column durability
- Possibility to use flow gradients

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Chrombook 2015
The world of Chromatography in your hands (W.282120)

Chromolith® HPLC columns
Race through separations with revolutionary Technology (PB6401ENEU)

Chromolith® HR

HPLC Columns with High Resolution

Monolithic silica columns consist of a single rod of high purity monolithic silica. A unique bimodal pore structure, gives greatly improved chromatographic performance in terms of separation efficiency and column back-pressure. Macropores with big Diameter dramatically reduce the column back-pressure and allow the use of faster flow rates, thereby considerably reducing the analysis time.

Your benefits:

- Fast flow rates
- Long column life time
- Excellent Peak symmetry
- High resolution at low back pressure

Chromolith® HR Columns	Content	Cat No.
Chromolith® HighResolution RP-18 endcapped 25-4.6 HPLC column	1 pcs	1.52020.0001
Chromolith® HighResolution RP-18 endcapped 50-4.6 HPLC column	1 pcs	1.52021.0001
Chromolith® HighResolution RP-18 endcapped 100-4.6 HPLC column	1 pcs	1.52022.0001
Chromolith® HighResolution RP-18 endcapped 150-4.6 HPLC column	1 pcs	1.52023.0001
Chromolith® HighResolution RP-18 endcapped 5-4.6 guard cartridges	3 pcs	1.52025.0001

Purospher® STAR HPLC and UHPLC columns

Best for pharmaceutical samples Purospher® STAR RP-18 endcapped

Analytical methods for pharmaceutical samples have to follow strong regulations. Purospher® STAR RP-18 endcapped columns are perfectly suitable for this demand and are the best choice for L1 columns listed in the USP (United States Pharmacopeia).

Product Description	Particle size	Column length	Column ID	Cat. No.
Purospher® STAR RP-18 endcapped (5 µm) LiChroCART® HPLC Cartridge				
Purospher® STAR RP-18 endcapped	5 µm	125 mm	3 mm	**1.50253.0001**
Purospher® STAR RP-18 endcapped	5 µm	125 mm	4 mm	**1.50251.0001**
Purospher® STAR RP-18 endcapped	5 µm	150 mm	4.6 mm	**1.50358.0001**
Purospher® STAR RP-18 endcapped	5 µm	250 mm	4.6 mm	**1.50359.0001**
Purospher® STAR RP-18 endcapped (5 µm), stainless steel Hibar® RT columns				
Purospher® STAR RP-18 endcapped	5 µm	125 mm	4 mm	**1.50036.0001**
Purospher® STAR RP-18 endcapped	5 µm	250 mm	4 mm	**1.50037.0001**
Purospher® STAR RP-18 endcapped	5 µm	150 mm	4.6 mm	**1.51455.0001**
Purospher® STAR RP-18 endcapped	5 µm	250 mm	4.6 mm	**1.51456.0001**
Purospher® STAR RP-18 endcapped (2 µm), stainless steel Hibar® HR UHPLC columns				
Purospher® STAR RP-18 endcapped	2 µm	50 mm	2.1 mm	**1.50646.0001**
Purospher® STAR RP-18 endcapped	2 µm	100 mm	2.1 mm	**1.50648.0001**
Purospher® STAR Phenyl (5 µm), stainless steel Hibar® RT columns				
Purospher® STAR Phenyl	5 µm	150 mm	4.6 mm	**1.51919.0001**

Your benefits:

- Outstanding resolution due to high separation efficiency
- Proven reliability and reproducibility from run to run and batch to batch
- Universal compatibility with best all-round performance acc. to Tanaka
- Maximum flexibility in method development and choice of mobile phase
- pH stability from pH 1.5 – 10.5
- Suitable for up to 100 % aqueous mobile phases
- Highest sensitivity and suitability for LC-MS applications

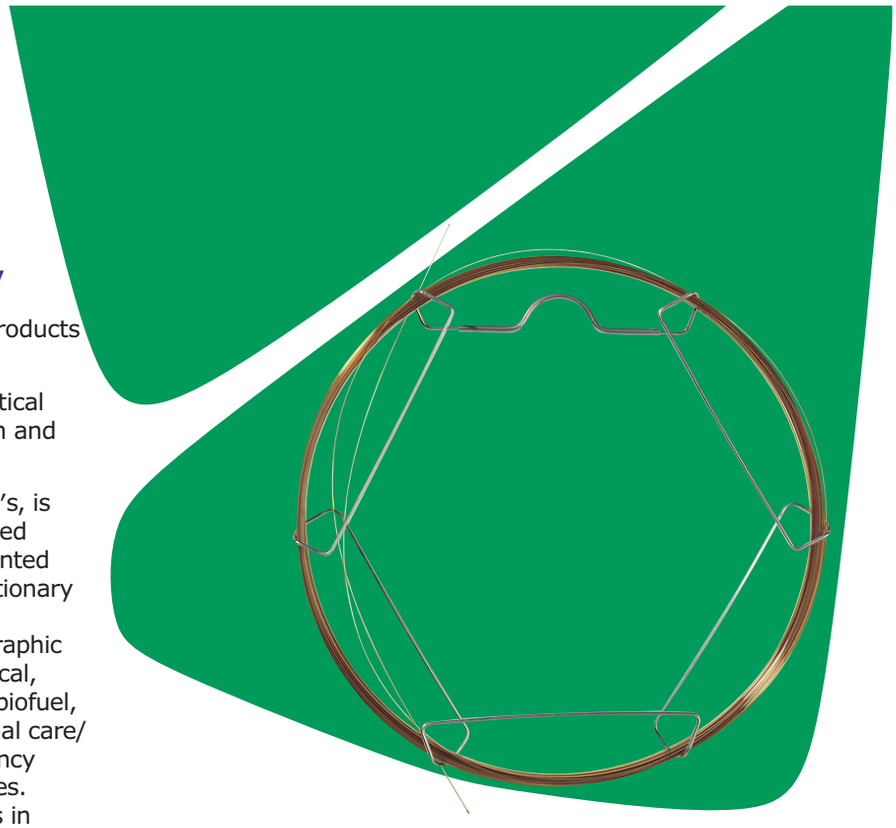
Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Chrombook 2015
The world of Chromatography in your hands (W.282120)

Chromolith® HPLC columns
Race through separations with revolutionary Technology

GC Columns



Accurate. Precise. Consistent. GC Capillary Columns by Industry

We know that only the most accurate analytical products will do.

That's why we offer the Supelco portfolio of analytical GC columns, providing you the accuracy, precision and consistency you need.

Gas chromatography, first established in the 1950's, is a mature analytical technique with many established applications. Therefore, it is probable that documented methods or journal articles exist stating which stationary phases have successfully been used for a given application. Today, GC is the preferred chromatographic technique in the environmental, petroleum, chemical, flavor & fragrance, and forensic industries. In the biofuel, agriculture, food & beverage, cosmetic and personal care/ cleaning product, and clinical industries, its frequency of use is equal to other chromatographic techniques. It is used for specific chromatographic applications in the industrial hygiene, pharmaceutical, and life science industries.

Product 35-280 °C temperature (isothermal or programmed)	Cat. No.
SLB®-5ms Capillary GC Column, L × I.D. 10 m × 0.10 mm, df 0.10 µm	**28465-U**
SLB®-5ms Capillary GC Column, L × I.D. 15 m × 0.10 mm, df 0.10 µm	**28466-U**
SLB®-5ms Capillary GC Column, L × I.D. 15 m × 0.25 mm, df 0.25 µm	**28469-U**
SLB®-5ms Capillary GC Column, L × I.D. 20 m × 0.18 mm, df 0.18 µm	**28564-U**
SLB®-5ms Capillary GC Column, L × I.D. 30 m × 0.25 mm, df 0.10 µm	**28467-U**
SLB®-5ms Capillary GC Column, L × I.D. 30 m × 0.25 mm, df 0.25 µm	**28471-U**
SLB®-5ms Capillary GC Column, L × I.D. 30 m × 0.25 mm, df 0.50 µm	**28473-U**
SLB®-5ms Capillary GC Column, L × I.D. 30 m × 0.25 mm, df 1.00 µm	**28476-U**
SLB®-5ms Capillary GC Column, L × I.D. 30 m × 0.32 mm, df 0.25 µm	**28482-U**
SLB®-5ms Capillary GC Column, L × I.D. 30 m × 0.32 mm, df 0.50 µm	**28484-U**
SLB®-5ms Capillary GC Column, L × I.D. 30 m × 0.53 mm, df 1.00 µm	**28559-U**
SLB®-5ms Capillary GC Column, L × I.D. 60 m × 0.25 mm, df 0.25 µm	**28472-U**

Further products are available depending on your needs

Please contact your local VWR organization for more information or have a look at our brochures:

Tools for Mass Spectrometry Proteomics and Metabolomics (PLG Ver. 1.0)

Product -60-340 °C temperature (isothermal)	Cat. No.
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 15 m × 0.10 mm, df 0.10 µm,	**24343**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.25 mm, df 0.25 µm,	**24079**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.32 mm, df 0.25 µm,	**24080-U**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.53 mm, df 0.50 µm,	**25325**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 60 m × 0.25 mm, df 0.25 µm,	**24081**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.32 mm, df 0.50 µm,	**24084**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.20 mm, df 0.20 µm,	**24169**
SUPELCOWAX® 10 Capillary GC Column, df 0.25 µm,	**23308-U**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.53 mm, df 1.00 µm,	**25301-U**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 60 m × 0.53 mm, df 2.00 µm	**25376**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.25 mm, df 0.50 µm	**24284**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 60 m × 0.32 mm, df 0.50 µm	**24085-U**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 60 m × 0.53 mm, df 1.00 µm	**25391**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.53 mm, df 2.00 µm,	**25375-U**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.75 mm, df 1.00 µm,	**23327-U**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 10 m × 0.10 mm, df 0.10 µm,	**25026-U**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 30 m × 0.32 mm, df 1.00 µm,	**24211**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 60 m × 0.32 mm, df 0.25 µm,	**24082**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 60 m × 0.32 mm, df 1.00 µm,	**24212**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 15 m × 0.25 mm, df 0.25 µm	**24077**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 15 m × 0.32 mm, df 0.25 µm,	**24078**
SUPELCOWAX® 10 Capillary GC Column, L × I.D. 15 m × 0.53 mm, df 1.00 µm,	**25300-U**

Solvents for Critical Applications in Gas Chromatography and LC-MS

The accurate analysis of residual solvents in drug substances with headspace gas chromatography, the organic trace analysis and LC-MS based methods require very pure solvents with extremely low concentrations of the defined residual solvents. Our solvents are developed specially for this highly sophisticated application areas.

Your benefits:

- Reliable, accurate analytical results
- Comprehensive application area
- Minimal signal-to-noise ratio
- Excellent batch to batch consistency

Product Description	Content	Cat. No.
Suprasolv® Solvents		
Dimethyl sulfoxide for headspace gas chromatography SupraSolv®	1 L	**1.01900.1000**
N,N-Dimethylformamide for headspace gas chromatography SupraSolv®	1 L	**1.00202.1000**
N,N-Dimethylacetamide for headspace gas chromatography SupraSolv®	1 L	**1.00399.1000**
Dimethyl sulfoxide for headspace gas chromatography SupraSolv®	500 mL	**1.01900.0500**
Water for headspace gas chromatography SupraSolv®	1000 mL	**1.00577.1000**
1-Methyl-2-pyrrolidone for headspace gas chromatography SupraSolv®	1000 mL	**1.02497.1000**
Unisolv® Solvents		
n-Hexane for organic trace analysis UniSolv®	1 L	**1.04369.1000**
n-Hexane for organic trace analysis UniSolv®	2.5 L	**1.04369.2500**
Dichloromethane for organic trace analysis UniSolv®	1 L	**1.06454.1000**
n-Pentane for organic trace analysis UniSolv®	2.5 L	**1.07288.2500**

Further products, bigger pack sizes and bulk materials are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Brighter LC-MS LC-MS
Grade Solvents and Reagents
for accurate, brilliant results
(PB1317ENEU Ver. 1.0)

LiChrosolv® Solvents

NEW High-purity UHPLC-MS LiChrosolv® solvents for rapid and reliable results.

For your highly sensitive UHPLC-MS analyses, how can you reduce noise and additional signals to a minimum? Our new high-end UHPLC-MS solvents raise the standard for low baseline noise and clean mass spectra. Our new range of advanced UHPLC-MS LiChrosolv® solvents have been developed to exceed all expectations, providing rapid and reliable results in both ESI/APCI positive and negative ionization modes.

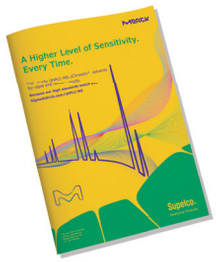
Product Description	Content	Cat. No.
Acetonitrile for UHPLC-MS LiChrosolv®	1 L	**1.03725.1002**
Methanol for UHPLC-MS LiChrosolv®	1 L	**1.03726.1002**
Water for UHPLC-MS LiChrosolv®	1 L	**1.03728.1002**

Your benefits:

- Tested and specified for UHPLC-MS (ESI & APCI) and UHPLC-UV: for analytical flexibility
- Lowest impurity profile (incl. PEG!): for interference-free baselines and minimized adduct formation and increased sensitivity & confidence
- Microfiltration through 0.2 µm filter – prolonged lifetime of filters and mechanical parts in HPLC systems – reduced risk of column clogging

Further products are available depending on your needs

Please contact your local VWR organization for more information or have a look at our brochures:



A Higher Level of Sensitivity. Every Time.

High-purity UHPLC-MS LiChrosolv® solvents for rapid and reliable results. (MK_FL2705EN)

High-purity UHPLC-MS LiChrosolv® solvents

LiChrosolv® Solvents gradient grade

With their high degree of UV transmittance, low particle count, low acidity and alkalinity and low evaporation residue level, LiChrosolv® solvents are ideal for reproducible separations. They are produced from specially selected raw materials, and undergo a number of purification steps prior to final packaging. We offer solvents in 'gradient grade' as well as 'isocratic grade'. This enables you to minimize the gradient effect of the solvent involved – for example in enantiomeric separations on chiral phases.

Your benefits:

- Documented as being suitable for UV, fluorescence and mass detection
- Optimized peak baseline separation
- High resolution and sensitivity
- Interference free baseline for better reproducibility

LiChrosolv® Solvents	Pack size	Packaging material	Cat. No.
Acetonitrile gradient grade for liquid chromatography LiChrosolv® Reag. Ph Eur	2,5 L	Glass bottle	**1.00030.2500**
	30 L	Barrel stainl. st.	**1.00030.9030**
Acetonitrile isocratic grade for liquid chromatography LiChrosolv®	2,5 L	Glass bottle	**1.14291.2500**
	30 L	Barrel stainl. st.	**1.14291.9030**
Ethanol gradient grade for liquid chromatography LiChrosolv®	2,5 L	Glass bottle	**1.11727.2500**
	30 L	Barrel stainl. st.	**1.11727.9030**
Methanol for liquid chromatography LiChrosolv®.	2,5 L	Glass bottle	**1.06018.2500**
	30 L	Barrel stainl. st.	**1.06018.9030**
Methanol gradient grade for liquid chromatography LiChrosolv® Reag. Ph Eur	2,5 L	Glass bottle	**1.06007.2500**
	30 L	Barrel stainl. st.	**1.06007.9030**
n-Hexane for liquid chromatography LiChrosolv®	2,5 L	Glass bottle	**1.04391.2500**
	30 L	Barrel stainl. st.	**1.04391.9030**
2-Propanol gradient grade for liquid chromatography LiChrosolv®	2,5 L	Glass bottle	**1.01040.2500**
	30 L	Barrel stainl. st.	**1.01040.9030**
Tetrahydrofuran for liquid chromatography LiChrosolv®	2,5 L	Glass bottle	**1.08101.2500**
	30 L	Barrel stainl. st.	**1.08101.9030**

Lichrosolv® Solvents hypergrade

As LC-MS is a highly sensitive analytical technique, impurities in your solvents can have an impact on the accuracy and reproducibility of your analytical results. Have confidence in your analysis by using our high purity solvents and blends designed to meet the demanding requirements of LC-MS applications, ensuring baseline stability, lowest impurity levels and, in addition, high UV transmittance.

Further products are available depending on your needs

Please contact your local VWR organization for more information or have a look at our brochures:

Brighter LC-MS LC-MS
Grade Solvents and Reagents for accurate, brilliant results (PB1317ENEU Ver. 1.0)

LiChrosolv® Solvents	Content	Cat. No.
Acetonitrile hypergrade for LC-MS LiChrosolv®	2,5 L	**1.00029.2500**
Methanol hypergrade for LC-MS LiChrosolv®	2,5 L	**1.06035.2500**
Water for chromatography (LC-MS Grade) LiChrosolv®	2,5 L	**1.15333.2500**
Ethyl acetate hypergrade for LC-MS LiChrosolv®	2,5 L	**1.03649.2500**
n-Heptane hypergrade for LC-MS LiChrosolv®	2,5 L	**1.03654.2500**
n-Hexane hypergrade for LC-MS LiChrosolv®	2,5 L	**1.03701.2500**
2-Propanol hypergr. F. LC-MS	2,5 L	**1.02781.2500**
ACN/acetic acid blend hypergr. F. LC-MS	2,5 L	**1.59004.2500**
ACN/formic acid blend hypergr. F. LC-MS	2,5 L	**1.59002.2500**
ACN/TFA blend hypergr. F. LC-MS	2,5 L	**1.59014.2500**
Water/acetic acid blend hypergr. F. LC-MS	2,5 L	**1.59007.2500**
Water/formic acid blend hypergr. F. LC-MS	2,5 L	**1.59013.2500**

Extensive QC testing ensuring highest specification

LiChropur® additives

To help you obtain the highest quality analysis, we offer a wide range of high purity mobile phase additives for LC-MS applications. The LC-MS portfolio includes the most commonly used acids, bases and volatile salts of high purity tested for LC-MS applications.

LiChropur® Additives	Content	Cat. No.
Acetic acid 100% for LC-MS LiChropur®	50 mL	**5.33001.0050**
Formic acid 98-100% for LC-MS LiChropur®	50 mL	**5.33002.0050**
Ammonia solution 25% for LC-MS LiChropur®	50 mL	**5.33003.0050**
Ammonium acetate for LC-MS LiChropur®	50 g	**5.33004.0050**
Ammonium hydrogen carbonate for LC-MS LiChropur®	50 g	**5.33005.0050**

Your benefits:

- LC-MS application tested for consistent quality according to the reserpine test
- Optimized to improve ionization and resolution
- Extremely low levels of inorganic and organic impurities
- Manufactured specifically for accurate and fast LC-MS
- Highest quality acids, bases & salts - specified in the certificate of analysis

Reagents for Ion-Pair Chromatography

LiChropur® ion-pair reagents allow high UV-transmittance even at low detection wavelengths. The reagents consist of strongly hydrophobic ionic compounds, which form neutral ion pairs with oppositely charged sample molecules. This enables simultaneous separation of charged and non-charged molecules.

LiChropur®	Content	Cat. No.
Octane-1-sulfonic acid sodium salt for ion pair chromatography LiChropur®	25 g	**1.18307.0025**
Tetra-n-butylammonium hydrogen sulfate for ion pair chromatography LiChropur®	25 g	**1.18312.0025**
Hexane-1-sulfonic acid sodium salt for ion pair chromatography LiChropur®	25 g	**1.18305.0025**
Heptane-1-sulfonic acid sodium salt for ion pair chromatography LiChropur®	25 g	**1.18306.0025**
Pentane-1-sulfonic acid sodium salt for ion pair chromatography LiChropur®	25 g	**1.18304.0025**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Brighter LC-MS LC-MS
Grade Solvents and Reagents for accurate, brilliant results (PB1317ENEU Ver. 1.0)

Reliable Water Determination

Aquastar® Karl Fischer Reagents and Standards

Precise water determination is always a challenge. Using our Aquastar® water standards and reagents you can always trust your results. The significance of the Karl Fischer Titration is emphasized by the fact that it has been included in the most important Pharmacopeias, American Standard Methods (ASTM), DIN EN ISO Guidelines, Association of Official Agricultural Chemist Methods (AOAC) and other requirements. Using Aquastar® certified water standards accredited according to DIN EN ISO 17034 together with Aquastar® Karl Fischer Reagents you are prepared for all audits and inspections from internal and external authorities. Water determination according to Karl Fischer Titration is one of the most precise and fastest method to determine water contents in a range from 10 ppm to 100 %. It could be used for a wide variety of samples.

Your benefits:

- Reliability: High accuracy
- Transparency: Following the requirement of the DIN EN ISO / IEC 17025 accreditation
- Easy to use: Convenient packaging
- Documentation: Certificate according to the ISO Guide 31 guideline for reference materials
- Precision: High batch to batch consistency

Product Description	Pack size	Packaging material	Cat. No.
Aquastar® One Component reagents			
Aquastar® CombiTitrant 5, approx. 5 mg H_2O/mL	500 mL	Glass bottle	**1.88005.0500**
	1 L	Glass bottle	**1.88005.1000**
	2.5 L	Glass bottle	**1.88005.2500**
Aquastar® CombiTitrant 2, approx. 2 mg H_2O/mL	1 L	Glass bottle	**1.88002.1000**
Aquastar® CombiTitrant 1, approx. 1 mg H_2O/mL	1 l	Glass bottle	**1.88001.1000**
Aquastar® CombiSolvent, methanol-free solvent	1 L	Glass bottle	**1.88008.1000**
	2.5 L	Glass bottle	**1.88008.2500**
Aquastar® CombiMethanol, dried methanol for Karl Fischer titration max. 0.01 % water	1 L	Glass bottle	**1.88009.1000**
	2.5 L	Glass bottle	**1.88009.2500**
Aquastar® Two Component reagents			
Aquastar® Titrant 5, approx. 5 mg H_2O/mL	500 mL	Glass bottle	**1.88010.0500**
	1 L	Glass bottle	**1.88010.1000**
	2.5 L	Glass bottle	**1.88010.2500**
Aquastar® Titrant 2, approx. 2 mg H_2O/mL	1 L	Glass bottle	**1.88011.1000**
Aquastar® Solvent, solvent for the two component titration	1 L	Glass bottle	**1.88015.1000**
	2.5 L	Glass bottle	**1.88015.2500**
Aquastar® Water standards			
Aquastar® Water Standard 0.01 %, 1 g contains 0.1 mg H_2O	10 x 8 mL	Glass ampoule	**1.88050.0010**
Aquastar® Water Standard 0.1 %, 1 g contains 1 mg H_2O	10 x 8 mL	Glass ampoule	**1.88051.0010**
Aquastar® Water Standard 1 %, 1 g contains 10 mg H_2O	10 x 8 mL	Glass ampoule	**1.88052.0010**
Aquastar® Water standard oven 1 %, solid standard for KF oven method	5 g	Glass bottle	**1.88054.0005**

Product Description	Pack size	Packaging material	Cat. No.
Aquastar® Water standard oil, standard for oil samples for coulometric Karl Fischer titration (15 – 30 ppm)	10 x 8 mL	Glass ampoule	**1.88055.0010**
Aquastar® Lactose standard 5 %, for volumetry and KF oven method	10 g	PE bottle	**1.12939.0010**
Aquastar® Sodium tartrate dehydrate, volumetric standard for water determination acc. to Karl Fischer, contains	100 g	PE bottle	**1.06664.0100**
Aquastar® Water standard 5 mg/ml, 1 mL contains 5 mg water	500 mL	Glass bottle	**1.09259.0250**
Aquastar® Coulometric Reagents			
CombiCoulomat frit, for cells with diaphragm	500 mL	Glass bottle	**1.09255.0500**
CombiCoulomat fritless, for cells with and without diaphragm	500 mL	Glass bottle	**1.09257.0500**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Brighter Water Determination

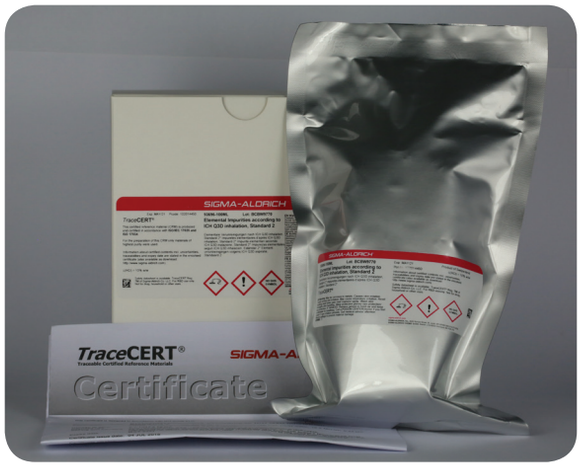
Aquastar® reagents for brilliant Karl Fischer titration results (PB1872ENEU)

Elemental Impurity Mixes as Certified Reference Material Standards

We Are Dedicated to Precision and Quality

Contamination of drug products with elemental impurities poses a risk to patient health. It is therefore critical to control, within acceptable limits, the levels of these impurities introduced into drug products through each step of the manufacturing process.

Our Elemental Impurity Mixes help to streamline your laboratory's ICP-OES/ICP-MS impurity analysis with accurate and consistent Certified Reference Materials for both calibration and quality control.



Your benefits:

- All mixes are CRMs, produced and analyzed under the scope of ISO/IEC 17025 and 17034 and traceable to primary standards
- Convenient concentrations according the oral, parenteral and inhalational permitted daily exposure levels (PDE) given in USP<32> and Ph.Eur. 9.3
- All mixes come with and extended certification report.

Certipur® ICP Standards

Certipur® ICP Standards	Packaging	Cat. No.
Sodium ICP standard traceable to SRM from NIST $NaNO_3$ in HNO_3 2-3% 10000 mg/L Na Certipur®	100 mL in Plastic bottle	**1.70381.0100**
Platinum ICP standard traceable to SRM from NIST H_2PtCl_6 in HCl 7% 1000 mg/L Pt Certipur®	100 mL in Plastic bottle	**1.70341.0100**
Osmium ICP standard $(NH_4)_2OsCl_6$ in HCl 7% 1000 mg/L Os Certipur®	100 mL in Plastic bottle	**1.70338.0100**
Ruthenium ICP standard $RuCl_3$ in HCl 7% 1000 mg/L Ru Certipur®	100 mL in Plastic bottle	**1.70347.0100**
Palladium ICP standard traceable to SRM from NIST $Pd(NO_3)_2$ in HNO_3 2-3% 1000 mg/L Pd Certipur®	100 mL in Plastic bottle	**1.70339.0100**

Certipur® ICP Standards

Certipur® Multi Element Standards	Content	Packaging	Cat. No.
ICP multi-element standard solution IV Certipur®	23 elements in diluted nitric acid, 1000 mg/L	100 mL	**1.11355.0100**
ICP multi-element standard solution VI for ICP-MS Certipur®	30 elements in dilute nitric acid	100 mL	**1.10580.0100**
ICP multi-element standard solution VIII Certipur®	24 elements in dilute nitric acid, 100 mg/L	100 mL	**1.09492.0100**
ICP multi-element standard solution XVI Certipur®	21 elements in diluted nitric acid, 100 mg/L	100 mL	**1.09487.0100**
ICP multi-element standard solution X for surface water testing Certipur®	23 elements in dilute nitric acid	100 mL	**1.09493.0100**
ICP multi-element standard solution XIII Certipur®	15 elements in diluted nitric acid	100 mL	**1.09480.0100**
ICP multi-element standard solution XVII Certipur®	7 elements in hydrochloric acid 15%, 100 mg/L	100 mL	**1.09495.0100**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Certipur® Ready-to-Use

pH Calibration Buffer Solutions Consistency is our standard (MK_BR1749EN)

TraceCERT® ICHQ3D Element Standards

TraceCERT ICHQ3D Element Standards	Content	Packaging	Cat. No.
Elemental impurities according to ICH Q3D oral, Standard 1, applicable for testing acc. to USP<232>, Ph.Eur. Gen Chapter 5.20	As 15 mg/L, Cd 5mg/L, Hg 30mg/L, Pb 5mg/L, Co 50mg/L, Ni 200mg/L, V 100mg/L, Ag 150 mg/L, Se 150 mg/L, Tl 8 mg/L in 12% HNO_3	100 mL	**19041**
Elemental impurities according to ICH Q3D oral, Standard 2, applicable for testing acc. to USP<232>, Ph.Eur. Gen Chapter 5.20	Au, Ir, Os, Pd, Pt, Rh, Ru each 100mg/L in 10% HCl	100 mL	**73108**
Elemental impurities according to ICH Q3D oral, Standard 3, applicable for testing acc. to USP<232>, Ph.Eur. Gen Chapter 5.20	Ba 140 mg/L, Cr 1100 mg/L, Cu 300 mg/L, Li 55 mg/L, Mo 300 mg/L, Sb 120 mg/L, Sn 600 mg/L in 5% HNO_3 + HF < 0.5%	100 mL	**69729**
Elemental impurities according to ICH Q3D parenteral, Standard 1, applicable for testing acc.to USP<232>, Ph.Eur. Gen Chapter 5.20	As 15 mg/L, Cd 2mg/L, Hg 3 mg/L, Pb 5 mg/L, Co 5 mg/L, Ni 20 mg/L, V 10 mg/L, Ag 10 mg/L, Se 80 mg/L, Tl 8 mg/L in 12% HNO_3	100 mL	**89118**
Elemental impurities according to ICH Q3D parenteral, Standard 2, applicable for testing acc.to USP<232>, Ph.Eur. Gen Chapter 5.20	Au 100 mg/L, Ir, Os, Pd Pt, Rh, Ru each 10 mg/L in 10% HCl	100 mL	**89922**
Elemental impurities according to ICH Q3D parenteral, Standard 3, applicable for testing acc.to USP<232>, Ph.Eur. Gen Chapter 5.20	Ba 70 mg/L, Cr 110 mg/L, Cu 30 mg/L Li 25 mg/L, Mo 150 mg/L, Sb 9 mg/L, Sn 60 mg/L in 5% HNO_3 + HF < 0.5%	100 mL	**07368**
Elemental impurities according to ICH Q3D inhalation, Standard 1, applicable for testing acc.to USP<232>, Ph.Eur. Gen Chapter 5.20	As 2 mg/L, Cd 2 mg/L, Hg 1 mg/L, Pb 5 mg/L, Co 3 mg/L, Ni 5 mg/L, V 1 mg/L, Ag 7 mg/L, Se 130 mg/L, Tl 8 mg/L in 12% HNO_3	100 mL	**92928**
Elemental impurities according to ICH Q3D inhalation, Standard 2, applicable for testing acc.to USP<232>, Ph.Eur. Gen Chapter 5.20	Au, Ir, Os, Pd, Pt, Rh, Ru each 1mg/L in 10% HCl	100 mL	**93696**
Elemental impurities according to ICH Q3D inhalation, Standard 3, applicable for testing acc.to USP<232>, Ph.Eur. Gen Chapter 5.20	Ba 300 mg/L, Cr 3 mg/L, Cu 30 mg/L, Li 25 mg/L, Mo 10 mg/L, Sb 20 mg/L, Sn 60 mg/L in 5% HNO_3 + HF <0.5%	100 mL	**93679**
Elemental impurities according to USP<232> dietary supplements	As 15 mg/L, Cd 5 mg/L, Hg 15 mg/L, Pb 5 mg/L in 12% HNO_3	100 mL	**93676**

Certipur® Ready-to-Use pH Calibration Buffer Solutions

Consistency is our standard

With certified pH values at both 20 °C and 25 °C, Certipur® pH buffer solutions from Supelco® analytical products meet your calibration needs. Compliance, always ensured

Certipur® Ready-to-use pH Buffer Solutions in Sachets	Content	Packaging	Cat. No.
		Fiber Case	
Buffer Solution tracable to SRM from NIST and PTB pH 2.00 (25 °C) Certipur®	Citric acid, sodium hydroxide, hydrogen chloride	30 x 30 mL	**1.99012.0001**
Buffer solution tracable to SRM from NIST and PTB pH 4.00 (25 °C) Certipur®	Citric acid/sodium hydroxide/hydrogen chloride	30 x 30 mL	**1.99064.0001**
Buffer solution traceable to SRM from NIST and PTB pH 4.01 (25 °C) Certipur®	Potassium hydrogen phthalate	30 x 30 mL	**1.99001.0001**
Buffer Solution traceable to SRM from NIST and PTB pH 6.00 (25 °C) Certipur®	Citric acid/sodium hydroxide	30 x 30 mL	**1.99016.0001**
Buffer solution traceable to SRM from NIST and PTB pH 7.00 (25 °C) Certipur®	Potassium dihydrogen phosphate/di-sodium hydrogen phosphate	30 x 30 mL	**1.99002.0001**
Buffer solution traceable to SRM from NIST and PTB pH 9.00 (25 °C) Certipur®	Boric acid/potassium chloride/sodium hydroxide solution	30 x 30 mL	**1.99003.0001**
Buffer solution tracable to SRM from NIST and PTB pH 9.18 (25 °C) Certipur®	Di-sodium tetraborate	30 x 30 mL	**1.99019.0001**
Buffer solution traceable to SRM from NIST and PTB pH 10.00 (25 °C) Certipur®	Boric acid/potassium chloride/sodium hydroxide	30 x 30 mL	**1.99004.0001**
Buffer Solution tracable to SRM from NIST and PTB pH 11.00 (25 °C) Certipur®	Boric acid, sodium hydroxide, potassium chloride	30 x 30 mL	**1.99021.0001**
Buffer Solution traceable to SRM from NIST und PTB pH 12.00 (25 °C) Certipur®	Di-sodium hydrogen phosphate/sodium hydroxide	30 x 30 mL	**1.99022.0001**

Certipur® buffer solutions in sachets [25 °C]

The ultimate in convenience

Simply tear open and place your probe directly into the sachet using the included stand.

Your benefits:

- Decreased risk of contamination
- Accurate pH value
- Packed as 30 x 30 mL sachets with convenient stand
- Always fresh and ready-to-use
- Use only what you need, reducing waste

Certipur® Ready-to-use pH Buffer Solutions	Content	Packaging	Cat. No.
Buffer solution, traceable to SRM from NIST and PTB pH 1.00 (20 °C) Certipur®	Glycine/sodium chloride/ hydrogen chloride	PE bottle	**1.09432.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 2.00 (20 °C) Certipur®	Citric acid/sodium hydroxide/hydrogen chloride	PE bottle	**1.09433.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 3.00 (20 °C) Certipur®	Citric acid/sodium hydroxide/hydrogen chloride	PE bottle	**1.09434.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 4.00 (20 °C) Certipur®	Citric acid/sodium hydroxide/hydrogen chloride	PE bottle	**1.09435.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 4.66 (20 °C) Certipur®	Acetic acid/sodium acetate	PE bottle	**1.07827.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 5.00 (20 °C) Certipur®	Citric acid/sodium hydroxide	PE bottle	**1.09436.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 6.00 (20 °C) Certipur®	Citric acid/sodium hydroxide	PE bottle	**1.09437.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 6.88 (20 °C) Certipur®	Di-sodium hydrogen phosphate/potassium dihydrogen phosphate	PE bottle	**1.07294.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 7.00 (20 °C) Certipur®	Di-sodium hydrogen phosphate/potassium dihydrogen phosphate	PE bottle	**1.09439.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 8.00 (20 °C) Certipur®	Boric acid/sodium hydroxide/hydrogen chloride	PE bottle	**1.09460.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 9.00 (20 °C) Certipur®	Boric acid/potassium chloride/sodium hydroxide	PE bottle	**1.09461.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 9.22 (20 °C) Certipur®	Di-sodium tetraborate	PE bottle	**1.01645.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 10.00 (20 °C) Certipur®	Boric acid/potassium chloride/sodium hydroxide	PE bottle	**1.09438.1000**
Buffer solution, traceable to SRM from NIST and PTB pH 11.00 (20 °C) Certipur®	Boric acid/potassium chloride/sodium hydroxide	PE bottle	**1.09462.1000**

*pH 4.00 (red), 7.00 (green), 9.00 (blue) and 10.00 (yellow) are also available in colored solutions for ease-of-use

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Certipur® Ready-to-Use
pH Calibration
Buffer Solutions
Consistency is our standard
(MK_BR1749EN)

Pharmaceutical Secondary Standards

Merck´s Secondary Pharmaceutical Standards are certified under double accreditation to ISO/IEC 17025 and ISO Guide 34 and are multi-traceable to reference standards from various Pharmacopeial organizations such as USP, PhEUR, and BP. These standards are produced and certified by Sigma-Aldrich RTC.

The ISO Guide 31 compliant Certificate of Analysis includes complete certification details and an independent certified purity value, allowing use of the standard by ISO/IEC 17025 accredited laboratories.

Your benefits:

- **Traceability** to United States Pharmacopeia (USP) and also to European Pharmacopoeia (EP) and British Pharmacopoeia (BP) standards where available.
- Analysis is performed using **instruments validated according to GMP** using pharmacopeia monograph methods
- **Certified purity value** according to ISO Guide 34 and ISO/IEC 17025 using mass balance approach
- **Comprehensive certificate** according to ISO Guide 31

Description	Package Size	Cat. No.
Cholecalciferol (Vitamin D3)	**500 mg**	**PHR1237**
Metformin hydrochlor	**500 mg**	**PHR1084**
Benzyl Alcohol	**1 g**	**PHR1019**
2,6-Dimethylaniline (Lidocaine Related Compound A)	**100 mg**	**PHR1669**
Retinyl Palmitate (Vitamin A Palmitate)	**1 g**	**PHR1235**
Methylparaben (Methyl parahydroxybenzoate)	**1 g**	**PHR1012**
alpha -Tocopherol	**500 mg**	**PHR1031**
Acetaminophen (Paracetamol)	**1g**	**PHR1005**
Ascorbic Acid	**2 g**	**PHR1008**
4-Isobutyl Acetophenone(Ibuprofen Related Compound C)	**500 mg**	**PHR1146**
Butylated Hydroxytoluene	**1 g**	**PHR1117**
Sodium Dehydroacetic Acid	**10 g**	**PHR1609**
Phenoxyethanol	**1.5g**	**PHR1121**
Propylene Glycol	**1.5g**	**PHR1051**
Pyridoxine Hydrochloride	**500 mg**	**PHR1036**
Caffeine	**1 g**	**PHR1009**
Calcium-D-Pantothenate	**500 mg**	**PHR1232**
Propylparaben (Propyl parahydroxybenzoate)	**1 g**	**PHR1010**
Ibuprofen	**1 g**	**PHR1004**
Meropenem	**1 g**	**PHR1772**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Pharmaceutical Secondary Standards
MK_BR2185EN

Suprapur® Acids

Suprapur® acids are suitable for trace analysis in the ng/g (ppb) range.

Suprapur® high purity acids Digestion with acids is often used during sample preparation. The reagents for sample preparation have an important impact on the outcome of the measurement. In modern instrumental trace analysis, any impurity can disturb the measurement. Acids with low impurities should be used to minimize the interference on the instrument signal.

Suprapur® acids offer the most suitable purity of wet digestion materials and they have low impurities during the entire minimum shelf life.

Suprapur® Acids	Packaging	Cat. No.
Hydrochloric acid 30% Suprapur®	1 L in Plastic bottle	**1.00318.1000**
Hydrofluoric acid 40% Suprapur®	1 L in Plastic bottle	**1.00335.0500**
Hydrogen peroxide 30% Suprapur®	1 L in Plastic bottle	**1.07298.1000**
Nitric acid 65% Suprapur®	1 L in Glass bottle	**1.00441.1000**
ortho-Phosphoric acid 85% Suprapur®	1 L in Plastic bottle	**1.00552.1000**
Sulfuric acid 96% Suprapur®	1 L in Glass bottle	**1.00714.1000**

Ultrapur® acids are preferred for ultra-trace analysis in the pg/g (ppt) range.

Ultrapur® reagents are produced by subboiling distillation. The slowly distilled reagents subsequently have the lowest possible trace-impurities. Ultrapur reagents are exclusively filled in pre-conditioned PFA (fluorpolymer) bottles. This material meets the highest demands of all users for ultratrace instrumental analysis, e.g. ICP-MS. Ultrapur reagents are packed in a stable outer-box.

Ultrapure® Acids	Packaging	Cat. No.
Hydrochloric acid 30% Ultrapur	1 L in Plastic bottle	**1.01514.1000**
Hydrofluoric acid 48% Ultrapur	1 L in Plastic bottle	**1.01513.1000**
Nitric acid 60% Ultrapur	1 L in Plastic bottle	**1.01518.1000**
Sulphuric acid 96% Ultrapur	250 mL in Plastic bottle	**1.01516.0250**
Water Ultrapur	1 L in Plastic bottle	**1.01262.1000**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

High purity acids and bases

Suprapur® acids and bases Ultrapur acids (PB1281ENEU)

EMSURE® Acids, Bases, Caustic alkalis, Salts and Solvents

Premium grade products for regulated and demanding analytical applications

EMSURE® products are the ideal choice for pharmaceutical quality control. Be it raw material incoming control, in-process control or final QC, reagent quality is decisive in pharmaceutical analysis. The greater and more consistent the quality, the more reproducible the results, and the lower the need for repeat analyses. Due to their exceptional quality and purity, our EMSURE® analytical reagents provide you with greater accuracy, efficiency and economy from the start.

Regulatory compliance – Specified beyond standards

- Most EMSURE® products meet or even exceed the requirements of ACS and Reag. Ph Eur.
- Thus they are ideally suitable for pharmacopoeia analysis in accordance to USP and EP
- The multi-standard compliance allows the product to be used internationally

Your benefits:

Accuracy and reliability – Absolute trust – every time

- Unmatched batch-to-batch consistency
- Reliable and reproducible results
- Lower analytical costs
- No repeat analyses

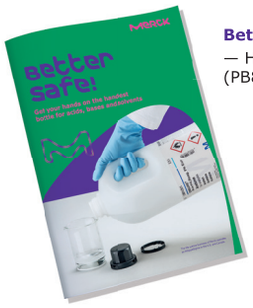
Convenience and safety – Packed with innovation

- Packaging is always compatible with the product
- Safe and convenient handling, storage and transportation
- Optimal protection of chemicals and reagents from contamination
- Wide choice of packaging materials and sizes

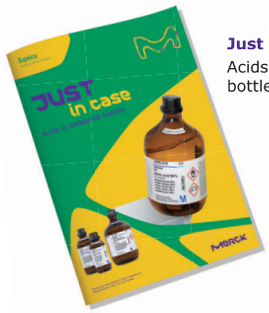
Product Description	Content	Packaging	Cat. No.
Solvents EMSURE®			
Acetone for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.00014.2511**
Chloroform for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	Glass bottle	**1.02445.2500**
Cyclohexane for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.09666.2511**
Dichloromethane for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	Glass bottle	**1.06050.2500**
Ethanol absolute for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.00983.2511**
Ethyl acetate for analysis ESMURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.09623.2511**
n-Heptane for analysis EMSURE® Reag. Ph Eur	2.5 L	HDPE bottle	**1.04379.2511**
n-Hexane for analysis EMSURE® ACS	2.5 L	HDPE bottle	**1.04367.2511**
Isooctane for analysis EMSURE® ACS, Reag. Ph Eur	2.5 L	Glass bottle	**1.04727.2500**
Methanol for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.06009.2511**
2-Propanol for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.09634.2511**
Acids EMSURE®			
Acetic acid (glacial) 100 % anhydrous for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.00063.2511**
Citric acid monohydrate for analysis EMSURE®	1 kg	HDPE bottle	**1.00244.1000**
Formic acid 98-100% for analysis EMSURE® ACS,Reag. Ph Eur	2.5 L	Glass bottle	**1.00264.2500**
Hydrochloric acid 32% for analysis EMSURE®	2.5 L	HDPE bottle	**1.00319.2511**
Hydrochloric acid fuming 37 % for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2 L	HDPE bottle	**1.00317.2011**
Hydrogen peroxide 30 % (Perhydrol®) for analysis EMSURE® ISO	2.5 L	HDPE bottle	**1.07209.2500**
Nitric acid 65 % for analysis EMSURE® ISO	2.5 L	Glass bottle	**1.00456.2500**
Nitric acid 69% for analysis EMSURE® ACS, Reag. Ph Eur	2.5 L	Glass bottle	**1.01799.2500**
ortho-Phosphoric acid 85 % for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 L	HDPE bottle	**1.00573.2500**
Sulfuric acid 95-97% for analysis (max. 0.005 ppm Hg) EMSURE® ACS,ISO,Reag. Ph Eur	2.5 L	Glass bottle	**1.00732.2500**
Salts EMSURE®			
Ammonium acetate for analysis EMSURE® ACS,Reag. Ph Eur	1 kg	HDPE bottle	**1.01116.1000**
Copper(II) sulfate pentahydrate for analysis EMSURE® ACS,ISO,Reag. Ph Eur	1 kg	HDPE bottle	**1.02790.1000**
Potassium carbonate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1 kg	HDPE bottle	**1.04928.1000**
Potassium chloride for analysis (<= 0.005% Br) EMSURE® ACS, ISO, Reag. Ph Eur	500 g	HDPE bottle	**1.04933.0500**
Potassium dihydrogen phosphate for analysis (<= 0.005% Na) EMSURE® ACS,ISO,Reag. Ph Eur	1 kg	HDPE bottle	**1.04877.1000**
Potassium iodide for analysis EMSURE® ISO, Reag. Ph Eur	2.5 kg	HDPE bottle	**1.05043.2500**
Silver nitrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1 kg	HDPE bottle	**1.01512.1000**
Sodium chloride for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1 kg	HDPE bottle	**1.06404.1000**
tri-Sodium citrate dihydrate for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1 kg	HDPE bottle	**1.06448.1000**
Sodium dihydrogen phosphate monohydrate for analysis EMSURE® ACS, Reag. Ph Eur	1 kg	HDPE bottle	**1.06346.1000**
Sodium sulfate anhydrous for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1 kg	HDPE bottle	**1.06649.1000**
Caustic alkalis and Bases EMSURE®			
Ammonia solution 25% for analysis EMSURE® ISO,Reag. Ph Eur	1 L	HDPE bottle	**1.05432.1011**
Potassium hydroxide pellets for analysis (max. 0.05% Na) EMSURE® ACS,Reag. Ph Eur	1 kg	HDPE bottle	**1.05029.1000**
Sodium hydroxide pellets for analysis (max. 0.02% K) EMSURE® ACS,Reag. Ph Eur,ISO	1 kg	HDPE bottle	**1.06469.1000**

Further products are available depending on your needs.
Please contact your local VWR organization for more information or have a look at our brochures:

Empower your lab
(PB8647EN00)



Better safe
— HDPE bottles
(PB8406EN00)



Just in case
Acids in Safebreak bottles (PB5645EN00)

MAS-100 NT® – Air Samplers

Choose the best acuracy for microbial airsampling

The MAS-100 NT® portable microbial air samplers are the leading instruments for use in critical environments. These compact yet sophisticated devices are the preferred choice for those demanding the highest quality in microbial air monitoring. The MAS-100 NT® systems feature a 300-hole perforated lid for increased collection efficiency and impaction speed. The systems utilize standard 90mm agar plates or can be adapted to fit 55 mm contact plates. Sampling at 100 LPM, these systems have the highest airflow accuracy available at ± 2.5 %, compared to others that can be as high as ±10 %.

MAS 100 NT Air Sampler	Content	Ord.No.
Air-sampler System MAS-100 NT	1 pcs.	**1.09191.0001**
AIR SAMPLER MAS-100 NT EX (EXPLOSION PROOFED)	1 pcs.	**1.09194.0001**

Your benefits:

- Very easy to handle
- Hardware and software developed according to GAMP 4
- A flow sensor is used to measure and ensures a flow of 100 SLPM +/- 2.5%
- Validated according to the EN ISO 14698 Part 1 annex B
- Fully meets the d50 requirements using the 300 x 0.6 mm sampling head

High quality TSB

For your aseptic process simulation

Every lot of our irradiated media is tested for Sterility, absence of Mycoplasma and comes in the high-performing granulated format. Along with the cleanroom ready triple-wrapped packaging.

Your benefits:

- Triple bagged and ready for cleanroom use
- Every lot is Mycoplasma tested
- Growth promotion tested to meet ISO® standard 11133
- Detailed certificates of origin and suitability
- Excellent filterability and solubility

TSB for Media-Fill	Content	Ord.No.
TRYPTIC SOY BROTH IRRADIATED USP FOR MICROBIOLOGY	5 kg	**1.00800.0500**
TRYPTIC SOY BROTH NON ANIMAL ORIGIN IRRADIATED FOR MICROBIOLOGY	5 kg	**1.00550.0500**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

The Safety Sentinels
(PB1265ENEU)

Zero Positives
(DS1258EN00)

Millipore®
Preparation, Separation, Filtration & Monitoring Products

Spectroquant® Spectrophotometers and Test Kits

Just Insert, Prove and Proceed

The spectrophotometers from Merck are designed to simplify your workflow and ensure reliable results for your water analysis. In combination with the Spectroquant® Test Kits you can leverage the full potential of the instruments and get reliable results in your process water or waste water analysis.

Your benefits:

- Reliability: High accuracy
- Transparency: Following the requirement of the DIN EN ISO / IEC 17025 accreditation
- Easy to use: Convenient packaging
- Documentation: Certificate according to the ISO Guide 31 guideline for reference materials
- Precision: High batch to batch consistency

Product Description	Content	Cat. No.
Spectroquant® Spectrophotometer		
Spectroquant® Prove 600 UV/VIS spectrophotometer	1 pcs	**1.73018.0001**
Spectroquant® Prove 300 UV/VIS spectrophotometer	1 pcs	**1.73017.0002**
Spectroquant® Prove 100 VIS spectrophotometer	1 pcs	**1.73016.0001**
Spectroquant® Testkits		
Ammonium Cell Test , 0.5 - 16.0 mg/L NH4-N 0.6 - 20.6 mg/L NH4+ Spectroquant®	25 Tests	**1.14544.0001**
Ammonium Cell Test, 4.0 - 80.0 mg/L NH4-N 5.2 - 103.0 mg/L NH4+ Spectroquant®	25 Tests	**1.14559.0001**
Chloride Cell Test 0.10 - 5.00 mg/L Cl- Spectroquant®	25 Tests	**1.01807.0001**
COD Cell Test 10 - 150 mg/L Spectroquant®	25 Tests	**1.14540.0001**
COD Cell Test M 300 - 3500 mg/L Spectroquant®	25 Tests	**1.14691.0001**
COD Cell Test, 25-1500 mg/L Spectroquant®	25 Tests	**1.14541.0001**
Nitrate Cell Test , 0.5 - 25.0 mg/L NO3-N 2.2 - 110.7 mg/L NO3- Spectroquant®	25 Tests	**1.14563.0001**
Nitrite Cell Test, 0.03 - 2.30 mg/L NO2- 0.010-0.700 mg/L NO2-N Spectroquant®	25 Tests	**1.14547.0001**
Nitrogen (total) Cell Test, 0.5 - 15.0 mg/L N Spectroquant®	25 Tests	**1.14537.0001**
Phosphate Cell Test 0.05 - 5.00 mg/L PO4-P 0.2 - 15.3 mg/L PO43- 0.11 - 11.46 mg/L P2O5 Spectroquant®	25 Tests	**1.14543.0001**
Phosphate Cell Test 0.5 - 25.0 mg/L PO4-P 1.5 - 76.7 mg/L PO43- 1.1 - 57.3 mg/L P2O5 Spectroquant®	25 Tests	**1.14729.0001**
Silicate (Silicic Acid) Test, 0.00025 - 0.50000.0 mg/L SiO2 0.00012 - 0.2337 mg/L Si Spectroquant®	25 Tests	**1.01813.0001**
Sulfate Cell Test, 0.50 - 50.0 mg/L SO42- Spectroquant®	25 Tests	**1.01812.0001**
Surfactants (anionic) Cell Test, 0.05 - 2.00 mg/L MBAS Spectroquant®	25 Tests	**1.02552.0001**
Surfactants (nonion.) Cell Test, 0.10 - 7.50 mg/L Triton® X-100 Spectroquant®	25 Tests	**1.01787.0001**

Product Description	Content	Cat. No.
Certified Reference Materials, ready-to-use, for Photometry. Standard Solutions, traceable to SRM from NIST, concentration incl. expanded measurement uncertainty		
Ammonium Standard Solution 1.00 mg/L NH4-N ± 0.04 mg/L NH4-N	100 mL	**1.25023.0100**
Ammonium Standard Solution 12.0 mg/L NH4-N ± 0.4 mg/L NH4-N	100 mL	**1.25026.0100**
Chloride Standard Solution 2.50 mg/L Cl- ± 0.08 mg/L Cl-	100 mL	**1.33011.0100**
COD Standard Solution 20.0 mg/L COD ± 0.7 mg/L COD KHP	100 mL	**1.25028.0100**
COD Standard Solution 400 mg/L COD ± 5 mg/L COD KHP	100 mL	**1.25031.0100**
COD Standard Solution 1000 mg/L COD ± 11 mg/L COD KHP	100 mL	**1.25032.0100**
Nitrate Standard Solution 15.0 mg/L NO3-N ± 0.4 mg/L NO3-N	100 mL	**1.25038.0100**
Nitrite Standard Solution 0.200 mg/L NO2-N ± 0.009 mg/L NO2-N	100 mL	**1.25041.0100**
Nitrogen (total) Standard Solution 12.0 mg/L N ± 0.3 mg/L N	100 mL	**1.25044.0100**
Phosphorus Standard Solution 0.400 mg/L PO4-P ± 0.400 mg/L PO4-P	100 mL	**1.25046.0100**
Phosphorus Standard Solution 15.0 mg/L PO4-P ± 0.4 mg/L PO4-P	100 mL	**1.25048.0100**
Silicate Standard Solution 0.1000 mg/L SiO2 ± 0.0040 mg/L SiO2	100 mL	**1.32244.0100**
Sulfate Standard Solution 40 mg/L SO42- ± 6 mg/L SO42-	100 mL	**1.25050.0100**
Surfactants (nonionic) Standard Solution 1.00 mg/L Triton® X-100 ± 0.16 mg/L Triton® X-100	100 mL	**1.33022.0100**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Water, Food & Environmental Analytics
(CA1240ENEU)

EMSURE® Solvents in big packs

Classical Solvents & Withdrawal Systems

All EMSURE® products are made from high-quality raw materials in our state-of-the-art production facilities, then tested for up to 70 parameters at our stringent quality control labs in Darmstadt, Germany. This results in outstanding chemical purity and extremely low limiting values. EMSURE® solvents in bigger pack sizes mean:

- Low trace impurities
- High purity
- Low evaporation residue
- Excellent batch to batch consistency
- Economical pack sizes

… and so those products are perfectly suitable for high quality demanding application in pharmaceutical industry.

Your benefits:

- Extremely good impurity profile
- Worldwide availability
- Comprehensive documentation
- Convenient and safe packaging
- Corresponding withdrawal systems

Product Description	Content	Packaging	Cat. No.
Solvents EMSURE®			
Acetone for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10 L	Stainless steel drum	**1.00014.6010**
	25 L		**1.00014.6025**
	190 L		**1.00014.6190**
Chloroform for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10 L	Stainless steel drum	**1.02445.6010**
	25 L		**1.02445.6025**
	190 L		**1.02445.6190**
Dichloromethane for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10 L	Stainless steel drum	**1.06050.6010**
	25 L		**1.06050.6025**
	190 L		**1.06050.6190**
N,N-Dimethylformamide for analysis EMSURE® ACS,ISO,Reag. Ph Eur	10 L	Stainless steel drum	**1.03053.6010**
	25 L		**1.03053.6025**
Ethanol absolute for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10 L	Stainless steel drum	**1.00983.6010**
	25 L		**1.00983.6025**
	190 L		**1.00983.6190**
Methanol for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10 L	Stainless steel drum	**1.06009.6010**
	25 L		**1.06009.6025**
	190 L		**1.06009.6190**
2-Propanol for analysis EMSURE® ACS, ISO, Reag. Ph Eur	10 L	Stainless steel drum	**1.09634.6010**
	25 L		**1.09634.6025**
	190 L		**1.09634.6190**
Withdrawal systems			
Withdrawal System (manual)	Suitable for solvents in 10 L and 25 L drums		**1.01114.0001**
Withdrawal System (pressurizing with innert gas)	Suitable for solvents in stainless steel barrels & drums		**1.06710.0001**
Necessary completive products	Dip tube for 10 L drums		**9.67100.1010**
	Dip tube for 25 L drums		**9.67100.1025**
	Dip tube for 190 L drums		**9.67100.1190**
Accessories	Opening key (2" / ¾")		**1.08803.0001**
	Antistatic set (3 cables)		**1.07070.0001**
	Reducing valve, 0.2 bar		**9.67100.9100**
	Pressure safety device, 0.5 bar		**9.67100.9004**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Empower your lab
(PB8647EN00)

Safety Connects
(MK_BR2712EN)

Prepsolv® Solvents in big packs

Solvents for Preparative Chromatography

Merck Prepsolv® solvents are tailored to facilitate scale-up from analytical to preparative separations and are manufactured taking into account the special requirements of preparative chromatography. They are characterized by an extremely low evaporation residue (< 1 mg/l) and low water content. The solvent quality ensures optimal product yield and column protection. Our extensive range of withdrawal systems ensures the solvents can always be safely and easily used without any risk of contamination.

Your benefits:

- Cost efficiency due to optimal product yield
- Perfect column protection
- Contamination free handling with dedicated withdrawal systems

Product Description	Content	Packaging	Cat. No.
Solvents Prepsolv®			
Acetonitrile for preparative chromatography Prepsolv®	2.5 L	Glass bottle	**1.13358.2500**
	30 L	Stainless steel barrel	**1.13358.9030**
	185 L		**1.13358.9185**
Ethyl acetate for preparative chromatography Prepsolv®	30 L	Stainless steel barrel	**1.13353.9030**
n-Hexane for preparative chromatography Prepsolv®	30 L	Stainless steel barrel	**1.04394.9030**
Methanol for preparative chromatography Prepsolv®	2.5 L	Glass Bottle	**1.13351.2500**
	30 L	Stainless steel barrel	**1.13351.9030**
	185 L	Stainless steel barrel	**1.13351.9185**
2-Propanol for preparative chromatography Prepsolv®	2.5 L	Glass Bottle	**1.13350.2500**
Withdrawal systems			
Withdrawal System (manual)	Suitable for solvents in 10l and 30l stainless steel barrels		**1.01123.0001**
Withdrawal System (pressurizing with innert gas)	Suitable for solvents in stainless steel barrels & drums		**1.06710.0001**
Necessary completive products	Dip tube for 30 L barrels		**9.67100.1041**
	Dip tube for 185 L barrels		**9.67100.1185**
Accessories	Opening key (2" / ¾")		**1.08803.0001**
	Antistatic set (3 cables)		**1.07070.0001**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Prepsolv® Flyer
(2017004110)

Safety Connects
(MK_BR2712EN)

Solvents for DNA and peptide synthesis

Pure, Dried – Efficient!

DNA and peptide synthesis applications demand solvents with the lowest possible water content. That's why our solvents are carefully processed and purified to optimize efficiency and yields in these critical processes. We provide a growing range of specialized solvents and reagents for DNA and peptide synthesis – both on a custom basis, as well as for the broad market. Our extensive range of withdrawal systems ensures solvents can be used safely and easily, without any risk of contamination.

Your benefits:

- Lowest specifications for water, and acid content
- Broad range of packaging solutions for specific synthesis instrumentation
- Flexible choice of volumes, from bottles to barrels and IBC

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Solvents for DNA & peptide synthesis
(MK_FL3108EN)

Safety Connects
(MK_BR2712EN)

Product Description	Content	Packaging	Cat. No.
Solvents for DNA and peptide synthesis			
Acetonitril for DNA synthesis (max. 10 ppm H2O)	30 L	Fully sealed stainless steel barrel	**1.12636.9033**
	185 L	Stainless steel barrel	**1.12636.9185**
Acetonitril for DNA synthesis (max. 30 ppm H2O)	185 L	Stainless steel barrel	**1.13212.9185**
N,N-Dimethylformamide for peptide synthesis (Free Amines ≤ 10 ppm)	25 L	Stainless steel drum	**1.00397.6025**
	190 L	Stainless steel drum	**1.00397.6190**
Dimethyl sulfoxide for DNA and peptide synthesis	30 L	Fully sealed stainless steel barrel	**1.02931.9033**
n-Methyl-2-pyrrolidone for peptide synthesis (Free Amines ≤ 5 ppm)	25 L	Stainless steel drum	**1.00574.6025**
Tetrahydrofuran for DNA and peptide synthesis	10 L	Fully sealed stainless steel barrel	**1.08107.9013**
Withdrawal systems			
Withdrawal System (pressurizing with innert gas)	Suitable for solvents in stainless steel barrels and drums		**1.06710.0001**
Necessary completive products	Dip tube for 185 L barrels		**9.67100.1185**
	Dip tube for 25 l drums		**9.67100.1025**
	Dip tube for 190 l drums		**9.67100.1190**
Withdrawal system for fully sealed stainless steel barrel	Spiral gas feeding tube (Nylon) with rapid action-connector, FFKM sealing, length: 180 cm		**9.67100.9051**
	Filling nozzle (stainless steel) self-closing, with stainless steel-coated PTFE-tube (80 cm) and rapid action connector		**9.67100.9090**
Accessories	Opening key (2" / ¾")		**1.08803.0001**
	Antistatic set (3 cables)		**1.07070.0001**

Msynth® Plus

Products for organic synthesis

The Msynth®plus line makes qualification of starting materials as simple as possible. Especially developed for organic synthesis in quality-conscious environments, such as pharma, electronic or cosmetic industries, Msynth®plus products are accompanied by the necessary documentation to help you easily fulfill quality requirements. The product range is optimized for research, process development and production. The portfolio comprises both organic and inorganic chemicals, including building blocks, reagents, solvents, process chemicals and additives.

Msynth®plus products are manufactured in compliance with DIN ISO 9001 guidelines, but not according to GMP requirements. Each batch is subjected to extensive in-house testing, which is described in the Supporting Dossier included with every product. Furthermore, traceability is secured through change control agreements with our suppliers. This enables us to offer our customers comprehensive change notification commitments. With Msynth®plus products, you have more transparency and more safety for your synthesis process.

Your benefits:

- Supporting Dossier included with every product
- Traceability secured through change control agreements
- Maximum transparency and safety for your synthesis process

Msynth®plus Product	Content	Cat. No.
Acetaldehyde Msynth®plus. CAS No. 75-07-0, EC Number 200-836-8.	100 mL	**8.45001.0100**
Tetra-n-butylammonium hydrogensulfate Msynth®plus. CAS 32503-27-8, pH 1 - 2 (100 g/l, H_2O, 20 °C)	100 g	**8.45083.0100**
Benzenesulfonic acid Msynth®plus. CAS No. 98-11-3, EC Number 202-638-7	250 g	**8.45004.0250**
Sodium borohydride (fine granular) Msynth®plus. CAS No. 16940-66-2, EC Number 241-004-4	500 g	**8.45048.0500**
Benzyl chloride Msynth®plus. CAS No. 100-44-7, EC Number 202-853-6	2,5 L	**8.45024.2500**
Sodium borohydride (fine granular) Msynth®plus. CAS No. 16940-66-2, EC Number 241-004-4	100 g	**8.45048.0100**
Iron(III) chloride (anhydrous) Msynth®plus. CAS 7705-08-0, EC Number 231-729-4, chemical formula $FeCl_3$	500 g	**8.45124.0500**
Iodomethane (stabilised with silver) Msynth®plus. CAS 74-88-4, pH 5.2 (H_2O, 25 °C)	1 L	**8.45045.1000**
Tetramethylammonium hydroxide (25% solution in water) Msynth®plus	1 L	**8.45151.1000**

Sigma-Aldrich®
Lab & Production Materials

Further products are available depending on your needs.
Please contact your local VWR organization for more information or have a look at our brochures:

Msynth® Plus Product + Supporting Dossier + Change Control
(MK_BR1299EN)

Extran® for reliable, residue-free cleaning

The perfect solution for cleaning your laboratory utensils

Extran® products ensure that everything that comes into contact with chemicals or biological substances is free of impurities — before and after use.

Your benefits:

- Reliable, residue-free all-purpose cleaner
- Free from NTA thus safer for lab staff
- Free from scents and dyestuffs
- Free from chlorine or other toxic ingredients
- All active ingredients are biodegradable
- Validation support to prove the absence of surfactants

Product Description	Content	Packaging	Cat. No.
Extran® MA 01 alkaline	1 L	PE bottle	**1.07555.1000**
	2.5 L	PE bottle	**1.07555.2500**
	5 L	PE bottle	**1.07555.5000**
Accessories: Dosing unit (PP) for 1 L Extran® bottle			**9.57571.1020**
Extran® MA 02 neutral	2.5 L	PE bottle	**1.07553.2500**
	5 L	PE bottle	**1.07553.5000**
Extran® MA 05 liquid, alkaline, phosphate-free concentrate	2.5 L	PE bottle	**1.40000.2500**
	5 L	PE bottle	**1.40000.5000**
Extran® AP 11 powder, mild alkaline	2 kg	PE bottle	**1.07558.2000**
	10 kg	PE drum	**1.07558.9010**
Extran® AP 12 powder, alkaline	2 kg	PE bottle	**1.07563.2000**
	10 kg	PE drum	**1.07563.9010**
Extran® AP 13 powder, alkaline with detergents	2 kg	PE bottle	**1.07565.2000**
	10 kg	PE drum	**1.07565.9010**
Extran® AP 17 liquid, alkaline	2.5 L	PE bottle	**1.40006.2500**
	5 L	PE bottle	**1.40006.5000**
Extran® AP 18 liquid, mild alkaline	2.5 L	PE bottle	**1.40118.2500**
	5 L	PE bottle	**1.40118.5000**
Extran® AP 21 liquid, acidic with phosphoric acid	2.5 L	PE bottle	**1.07559.2500**
Extran® AP 22 liquid, acidic with citric acid	2.5 L	PE bottle	**1.07561.2500**
Extran® AP 41 powder, enzymatic	2 kg	PE bottle	**1.07570.2000**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Cleaner
Extran® detergents (W.283119)

Milli-Q® IQ 7000 Purification System

An ultrapure water solution designed with YOU in mind

Compact, ergonomic and intelligent. With its large touch screen for intuitive interaction, the new Q-POD® ultrapure water dispenser offers all the flexibility you need.

Better than 18.2 MΩ•cm?

We have developed Milli-Q® IQ 7000 to ensure that your experiments are safe from ionic contaminant traces. Our R&D validation data in Ion Chromatography (IC) show that the system is able to consistently and reliably produce 18.2 MΩ•cm (at 25 °C) ion-free water at the sub-ppb level.

Milli-Q IQ 7000 also delivers low TOC (Total Organic Carbon) ultrapure water. Best results of less than 2 ppb are achieved with Elix® feed water. TOC is measured online by the A10® monitor, which has been redesigned for even greater accuracy.

Your benefits:

- Compact & Ergonomic
- Simple and intuitive dispensing
- Environmental friendly UV lamp (NO mercury)
- Purification media with exceptional performance

Product Description	Content	Cat. No.
Connector 2m system to Q-POD®	1 pcs.	**172-0020**
IPAK Meta® polishing cartridge	1 pcs.	**172-0017**
IPAK Quanta® polishing cartridge	1 pcs.	**172-0018**
Millipak® 0.22µm filter	1 pcs.	**172-0020**
Milli-Q® IQ 7000 purification system	1 pcs.	**172-0029**
Q-POD® remote dispenser	1 pcs.	**172-0030**

Milli-Q®
Lab Water Solutions

Further products are available depending on your needs.
Please contact your local VWR organization for more information or have a look at our brochures:

Milli-Q® IQ 7000
Purification System
(PB5475ENEU)

Acids in Safebreak bottles

Now also available in 0.5 Liter and 1 Liter pack size

Glass bottles can break! And it might happen every day in the lab. Good to have a safer alternative: the Merck Safebreak bottle:

- Should breakage occur, the acid and any glass splinters are reliably contained
- Even after frequent opening and closing, the screw cap remains perfectly intact
- The bottle is just as recyclable as a conventional glass bottle
- Now available in various pack sizes: 0.5 L, 1 L and 2.5 L

Your benefits:

- Safety: If the glass breaks, the splinters and acid are caught safely by the PE jacket
- Eco-friendly: Glass bottle with PE coating
- Long shelf life: Offers all the benefits of conventional glass bottles
- Tightly closed: Merck exclusive S40 closure system
- Convenience: Optimum pouring characteristics thanks to the S40 thread
- Safes money: The bottle is just as recyclable as a conventional glass bottle

Product Description	Pack size	Packaging material	Cat. No.
Acetic acid (glacial) 100% anhydrous for analysis EMSURE® ACS,ISO,Reag. Ph Eur	0.5 L	Safebreak bottle	**1.00063.0510**
	1 L		**1.00063.1010**
	2.5 L		**1.00063.2510**
Hydrochloric acid fuming 37% for analysis EMSURE® ACS,ISO,Reag. Ph Eur	0.5 L	Safebreak bottle	**1.00317.0510**
	1 L		**1.00317.1010**
	2.5 L		**1.00317.2510**
Nitric acid 65% for analysis EMSURE® ISO	0.5 L	Safebreak bottle	**1.00456.0510**
	1 L		**1.00456.1010**
	2.5 L		**1.00456.2510**
Nitric acid 69% for analysis EMSURE® ACS,Reag. Ph Eur	0.5 L	Safebreak bottle	**1.01799.0510**
	1 L		**1.01799.1010**
	2.5 L		**1.01799.2510**
ortho-Phosphoric acid 85% for analysis EMSURE® ACS,ISO,Reag. Ph Eur	0.5 L	Safebreak bottle	**1.00573.0510**
	2.5 L		**1.00573.2510**
Perchloric acid 70-72% for analysis EMSURE® ACS,ISO,Reag. Ph Eur	0.5 L	Safebreak bottle	**1.00519.0510**
	1 L		**1.00519.1010**
	2.5 L		**1.00519.2510**
Sulfuric acid 95-97% for analysis (max. 0.005 ppm Hg) EMSURE® ACS,ISO,Reag. Ph Eur	0.5 L	Safebreak bottle	**1.00732.0510**
	2.5 L		**1.00732.2510**
Sulfuric acid 95-97% for analysis EMSURE® ISO	0.5 L	Safebreak bottle	**1.00731.0510**
	1 L		**1.00731.1010**
	2.5 L		**1.00731.2510**
Sulfuric acid 98% for analysis EMSURE®	0.5 L	Safebreak bottle	**1.12080.0510**
	2.5 L		**1.12080.2510**

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Empower your lab
(PB8647EN00)

Just in case
Acids in Safebreak bottles (PB5645EN00)

Chemizorb® absorbents

The fast, safe & easy way to clear up chemical spills

Accidents happen in every lab. With Chemizorb®, you can absorb and neutralize aggressive or unpleasant spilled liquids quickly and safely. The fast-acting absorbents consist of porous mineral or synthetic copolymers that are chemically inert, and are capable of absorbing up to 400 percent of their own weight in liquid. The Chemizorb® range offers a choice of absorbents for a variety of spillages.

Your benefits:

- Quick take-up of chemicals minimizes risks
- Many different types of Chemizorb® available:
  - The ”Allrounders” - Chemizorb® powder and granules
  - The “Specialists” - Chemizorb® for alkalis, acids and hydrofluoric acid
  - The “All-in-one” Chemizorb® Hg kit for mercury
- Secure process monitoring through pH indicators
- High absorption capacity reduces product use and costs

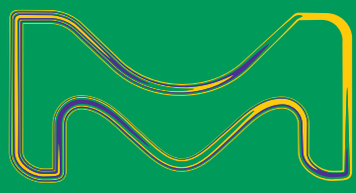
Product Description	Content	Packaging	Cat. No.
Chemizorb® powder absorbent for spilled liquids	500 g	PE bottle	**1.02051.0500**
	25 kg	Fibre carton	**1.02051.9025**
Chemizorb® granules absorbent for spilled liquids	1 kg	PE bottle	**1.01568.1000**
	5 kg	Bucket, plastic	**1.01568.5000**
	20 kg	Paper sack	**1.01568.9020**
	20 kg	PE drum	**1.01568.9021**
Chemizorb® OH- absorbent and neutralizer for spilled alkalis, with indicator	1 kg	PE bottle	**1.01596.1000**
Chemizorb® H+ absorbent and neutralizer for spilled acids, with indicator	3 L	PE bottle	**1.02491.3000**
	16 L	Bucket, plastic	**1.02491.9016**
Chemizorb® HF absorbent and neutralizer for spilled hydrofluoric acid, with indicator	1 kg	PE bottle	**1.01591.1000**
Chemizorb® Hg Reagents and accessories for absorbent for mercury	1 PC	PE case	**1.12576.0001**
1 set consisting of: 500 g of reagent 1, 100 mL of reagent 2, one small tub, one large disposal can, protective gloves, …			
Chemizorb® Hg reagents refill pack for Ord. No. 1.12576.0001	1 PC	PE can	**1.01569.0001**
1 set consisting of: 500 g reagent 1 and 100 mL reagent 2			

Further products are available depending on your needs.

Please contact your local VWR organization for more information or have a look at our brochures:

Empower your lab
(PB8647EN00)

Soak it up
(PB8652EN00)



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For further information, please contact your local VWR organization or have a look at the VWR webpages:
vwr.com