

HiPerSolv CHROMANORM® HPLC Reagents

**01. HIGH PURITY
SOLVENTS FOR HPLC
APPLICATIONS**

**02. ION PAIR REAGENTS
AND BUFFERS**

**03. DESIGNED TO
MEET YOUR
ANALYTICAL AND
QUALITY CONTROL
REQUIREMENTS**

**04. SPECIFIED TO
MEET THE MOST
DEMANDING
REQUIREMENTS OF
HPLC, LC-UV, LC-MS
AND ULC-MS**



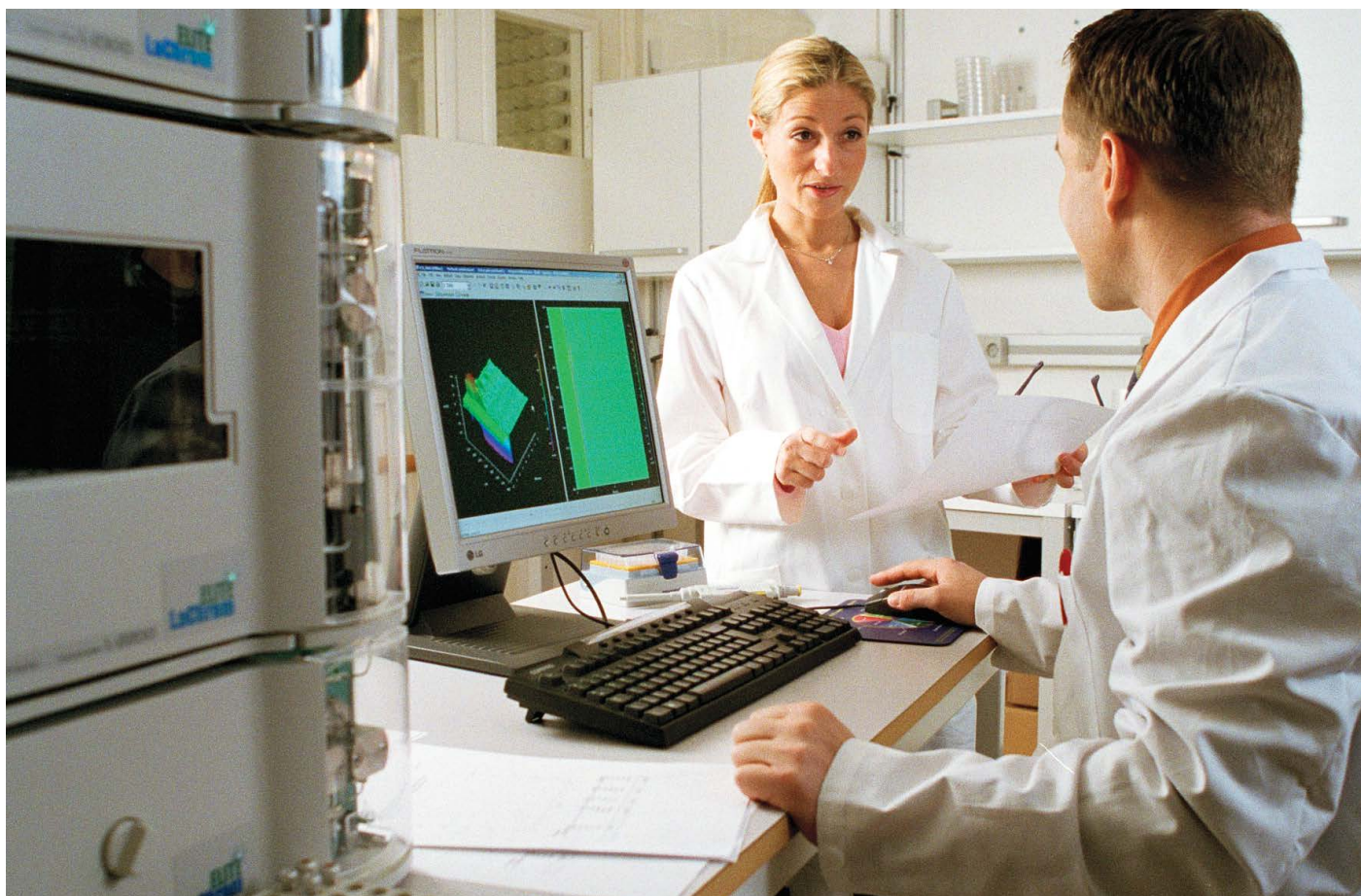
HiPerSolv CHROMANORM[®] Solvents

Specifications

- High UV transmission
- Gradient test at 210, 235 or 254 nm
- Low residue on evaporation
- Excellent batch-to-batch reproducibility
- Low absorbance values
- Acetonitrile and methanol super gradient grade suitable for UPLC/UHPLC available

Plus for LC-MS grade products

- Low alkaline metal content of max. 100 ppb with many metals at less 20 ppb for Ultra LC-MS grades
- Low level of ionic background
- Ultra grades suitable for ULC-MS/UPLC/UHPLC



HIPERSOLV CHROMANORM® HIGH PURITY SOLVENTS FOR HPLC

Chromatography methods are continually improving to offer better sensitivity to meet today's demands. In the last 5 years, many new ranges have been introduced or improved to answer to the strict requirements of the apparatus or detection methods, especially with impurities which can generate many issues.

So, with their high degree of UV transmittance, low evaporation residue level, low particule count, low acidity and alkalinity HiPerSolv CHROMANORM 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.

HPLC is now a key technique in research, development and quality control used in different applications. Our wide range is now composed by solvents

VWR chemical specifications quote maximum permitted levels of impurities, not typical analyses.



Full specifications and Certificates of Analysis are readily available from the VWR website **vwr.com**

Solvents

- HPLC Ion pair reagents
- HPLC buffers
- LC-MS mixes
- LC-MS additives
- Preparative applications
- Isocratic solvents
- Gradient grade solvents
- Super gradient grade solvents
- LC-MS Solvents
- UPLC/UHPLC LC-MS Solvents

Description	Preparative HPLC	HPLC isocratic mode	HPLC gradient mode	LC-MS	UHPLC-MS
HiPerSolv CHROMANORM® for preprative HPLC					
HiPerSolv CHROMANORM® isocratic grade					
HiPerSolv CHROMANORM® gradient grade					
HiPerSolv CHROMANORM® super gradient grade					
HiPerSolv CHROMANORM® LC-MS grade					
HiPerSolv CHROMANORM® ULTRA LC-MS grade					



VWR Chemicals LC-MS solvents, additives, mixes and associated products

Perform LC-MS with a complete range of reagents, filters, vials and safety caps.



MORE
INFORMATION

PB20067-EN

Description	Pk (l)	Assay min. %	Residue max.%	Water max%	Min. % UV transmittance/wavelength (nm) (1 cm quartz cell, distilled water)							Cat. No.
Acetone	1	99,8	0,0005	0,20	50/345	80/350	98/360					20067.290
	2,5	99,8	0,0005	0,20	50/345	80/350	98/360					20067.320
Acetonitrile super gradient grade*	1	99,95%	0,0002	0,003	80/195	95/200	96/210	97/220	98/230	99/240	99/250	83639.290
	2,5	99,95%	0,0002	0,003	80/195	95/200	96/210	97/220	98/230	99/240	99/250	83639.320
	4	99,95%	0,0002	0,003	80/195	95/200	96/210	97/220	98/230	99/240	99/250	83639.400
	5 (ALU)	99,95%	0,0002	0,003	80/195	95/200	96/210	97/220	98/230	99/240	99/250	83639.360
Acetonitrile gradient grade*	1	99,95%	0,0005	0,02		80/195	90/200	94/210	96/220	99/240		20060.290
	2,5	99,9	0,0005	0,02		80/195	90/200	94/210	96/220	99/240		20060.320
	2,5 (PCG)	99,9	0,0005	0,02		80/195	90/200	94/210	96/220	99/240		20060.420
	5 (ALU)	99,9	0,0005	0,02		80/195	90/200	94/210	96/220	99/240		20060.360
	1	99,9	0,0005	0,03	80/200	85/210	90/220	98/230	99/250			20048.290
Acetonitrile isocratic grade	2,5	99,9	0,0005	0,03	80/200	85/210	90/220	98/230	99/250			20048.320
	5 (ALU)	99,9	0,0005	0,03	80/200	85/210	90/220	98/230	99/250			20048.360
Butan-1-ol	1	99,8	0,0010	0,10	50/230	80/240	98/310					83633.290
1-Chlorobutane	2,5	99,7	0,0005	0,01	50/227	80/232	98/250					83631.320
	1	99,8	0,0010	0,05	50/250	84/260	95/280	98/300				83627.290
Chloroform (stab. EtOH***)	2,5	99,8	0,0010	0,05	50/250	84/260	95/280	98/300				83627.320
Chloroform (stab. MB**)	2,5	99,8	0,0010	0,05	50/250	84/260	95/280	98/300				83626.320
Cyclohexane	1	99,5	0,0005	0,01	75/230	80/240	98/250					83629.290
	2,5	99,5	0,0005	0,01	75/230	80/240	98/250					83629.320
Dimethyl sulphoxide	1	99,5	0,001	0,05	60/280	75/300	90/320	95/330	98/360			85922.290
	2,5	99,5	0,001	0,05	60/280	75/300	90/320	95/330	98/360			85922.320
1,2 Dichloroethane	1	99,8	0,0005	0,01	50/240	80/250	90/270					85923.290
	2,5	99,8	0,0005	0,01	50/240	85/250	95/270					85923.320
Dichloromethane (stab. EtOH***)	1	99,8	0,0010	0,05	50/240	80/245	98/260					83623.290
	2,5	99,8	0,0010	0,05	50/240	80/245	98/260					83623.320
	1	99,8	0,0010	0,05	50/240	80/245	98/260					23373.290
Dichloromethane (stab. MB**)	2,5	99,8	0,0010	0,05	50/240	80/245	98/260					23373.320
	4l	99,8	0,0010	0,05	50/240	80/245	98/260					23373.400
Diethyl ether (stab. EtOH***)	2,5	99,5	0,0005	0,05	30/220	50/230	80/250	90/270	98/300			83624.320
Dimethylformamide	2,5	99,9	0,0005	0,02	10/270	50/275	80/290	90/300	98/330			83634.320
NN-Dimethylacetamide	4	99,5	0,0005	0,05	10/270	71/290	89/310	94/320	98/400			83636.350
1,4-Dioxan	2,5	99,8	0,0005	0,05	50/245	80/270	98/300					83628.320
	1	99,8	0,0005	-	30/210	96/254	98/280					20825.290
Ethanol 96%	2,5	99,8	0,0005	-	30/210	96/254	98/280					20825.324
	1	99,8	0,0010	0,20	50/220	90/250	98/280					153385E
Ethanol 99,7 - 100%	2,5	99,8	0,0010	0,20	50/220	90/250	98/280					153386F
	1	99,8	0,0005	0,10	70/260	90/270	98/300					83621.290
Ethyl acetate	2,5	99,8	0,0005	0,10	70/260	90/270	98/300					83621.320
	1	99	0,0010	0,01	50/210	80/220	98/245					24539.290
N-Heptane	2,5	99	0,0010	0,01	50/210	80/220	98/245					24539.320
Iso-Hexane	2,5	97	0,0005	0,01	50/205	80/220	95/230	98/280				83622.320
	1	97	0,0005	0,005	50/210	80/220	98/245					24575.290
	2,5	97	0,0005	0,005	50/210	80/220	98/245					24575.320
N-Hexane	4	97	0,0005	0,005	50/210	80/220	98/245					24575.400
Methanol super gradient grade*	1	99,9	0,0001	0,02%	45/210	65/220	70/225	85/235	90/240	95/250	98/260	85681.290
	2,5	99,9	0,0001	0,02%	45/210	65/220	70/225	85/235	90/240	95/250	98/260	85681.320
	4	99,9	0,0001	0,02%	45/210	65/220	70/225	85/235	90/240	95/250	98/260	85681.400
	5	99,9	0,0001	0,02%	45/210	65/220	70/225	85/235	90/240	95/250	98/260	85681.360
Methanol gradient grade	1	99,8	0,0005	0,03	50/220	80/235	98/260					20864.290
	2,5	99,8	0,0005	0,03	50/220	80/235	98/260					20864.320
	4	99,8	0,0005	0,03	50/220	80/235	98/260					20864.400
	2,5 (PCG)	99,8	0,0005	0,03		50/220	80/235	98/260				20864.420
	5 (ALU)	99,8	0,0005	0,03		50/220	80/235	98/260				20864.360
	2,5	99,8	0,0005	0,05	45/220	75/240	96/260					20837.320
Methanol isocratic grade	5 (HDPE)	99,8	0,0005	0,05		45/220	75/240	96/260				20837.360
Methanol isocratic grade	2,5	99,8	0,0005	0,05	60/210	80/220	90/230	92/235	95/240	98/250	98/260	152506X
N-Pentane	2,5	99	0,0005	0,01	10/200	40/210	70/215	90/222	98/240			83632.320
Propan-1-ol	2,5	99,8	0,0010	0,05	50/230	80/240	98/270					83635.320
	1	99,8	0,0005	0,10	50/220	80/230	98/250					20880.290
	2,5	99,8	0,0005	0,10	50/220	80/230	98/250					20880.320
Propan-2-ol	4	99,8	0,0005	0,10	50/220	80/230	98/250					20880.400
Tetrahydrofuran	1	99,7	0,0005	0,10	40/230	60/240	70/250	80/260	96/280	98/300		28559.290
	2,5	99,7	0,0005	0,10	40/230	60/240	70/250	80/260	96/280	98/300		28559.320
	1	99,8	0,0005	0,02	70/300	80/310	95/330	98/350				83625.290
	2,5	99,8	0,0005	0,02	70/300	80/310	95/330	98/350				83625.320
Toluene	4l	99,8	0,0005	0,02	70/300	80/310	95/330	98/350				83625.400
	1	99,5	0,0005	0,01	70/220	80/235	98/255					83630.290
2,2,4-Trimethylpentane	2,5	99,5	0,0005	0,01	70/220	80/235	98/255					83630.320
	1	-	0,0005	-	Gradient at 254 nm, max. 2 mAU							23595.294
	2,5	-	0,0005	-	Gradient at 254 nm, max. 2 mAU							23595.328
Water	4	-	0,0005	-	Gradient at 254 nm, max. 2 mAU							23595.400
Water super gradient**** grade	1	-	0,0005	-	Gradient at 220 nm, max. 5 mAU; at 254 nm, max. 2 mAU							83650.290
	2,5	-	0,0005	-	Gradient at 220 nm, max. 5 mAU; at 254 nm, max. 2 mAU							83650.320

Acetonitrile and methanol super gradient grade are also available in new large aluminium 10 and 28 l packs and 200 l stainless steel drums

* Gradient at 210 nm, max. 3 mAU

** Stabilised with 2-methyl-2-butene

*** Stabilised with ethanol

**** Specific conductivity 25 °C max. 1 µs/cm

**** Fluorescence test:

(as quinine) (254 nm) max. 1 ppb

(as quinine) (365 nm) max. 1 ppb

**** Colour: Max. 10 APHA

ALU: Aluminium can

HDPE: High density polyethylene bottle

PCG: Plastic coated glass bottle

all other products are supplied in glass bottles

In addition to the HPLC solvents listed

above, VWR has a wide range of

mobile phase modifiers and ion-pair

reagents. For more go to vwr.com.

HPLC ion-pair reagents

For HPLC gradient elution, we offer a wide range of ion-pair reagents which exhibit minimal extinction in the low UV region, and an excellent transparency down to 200 nm, even when high concentrations have been added.

- High purity >99,9%
- pH controlled
- Minimal UV absorption
- Loss on drying

Description	CAS N°	25 g	100 g
1-Butanesulphonic acid sodium salt	2386-54-1	85790.150	
1-Heptanesulphonic acid sodium salt	22767-50-6	152782J	152783K
1-Hexanesulphonic acid sodium salt	2832-45-3	152792L	152793M
Lithium dodecyl sulphate	2044-56-6	85793.150	
1-Octanesulphonic acid sodium salt	5324-84-5	152802T	152803U
1-Pentanesulphonic acid sodium salt	22767-49-3	152812V	152813W
Sodium-1-decanesulphonate	13419-61-9	85792.150	
Tetrabutylammonium hydrogen sulphate	32503-27-8	85794.150	



HPLC Buffers

In HPLC the pH plays an important role. So, to improve your HPLC separation, please find our complete range of High purity HPLC salts and acids.

Description	CAS N°	50 g/50 ml	100 g/100 ml	250 g/250 ml	500 g/500 ml	1 kg/1 L
Acetic acid 99.9%	64-19-7			87023.260		87023.290
Ammonia 32%	1336-21-6		153312K			
Ammonium acetate	631-61-8			153164R		
Orthophosphoric acid 85%	7664-38-2			153154D		
Potassium dihydrogen phosphate	7778-77-0				153184U	
Sodium chloride	7647-14-5				153274V	
Sodium dihydrogen phosphate anhydrous	7558-80-7			85916.230		
Sodium perchlorate monohydrate	7791-07-3			153233M		



Chromatography **microsites**

VWR CHROMATOGRAPHY SOLUTIONS

- Product pages, application areas and product links
- Knowledge centre Videos, white papers, technical papers, webinars
- Application library Search for 1000's of applications

vwr.com/chromatography

VWR CHEMICAL CORNER

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- Brochures, Innovations, promotions

<https://uk.vwr.com/cms/chemicals>

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vwr.com/avantorcolumns

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- Information on all ACE columns MDK, MDK + Chromsword
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- Cross reference of ACE equivalence to competitive products for easy switching

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Setting science in motion to create a better world



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