

VWR BIOPROCESSING CHEMICALS AND EXCIPIENTS

VWR is now part of Avantor
Learn more on page 07

Products and services supporting your entire drug development process chain

- Suitable for bioprocessing and excipient use
- BSE- / TSE-free
- Custom packaging and testing
- Three-lot sampling
- Convenient standard pack sizes
- Analytical laboratory support
- Regulatory support including change management
- Supply chain transparency and auditing of raw material manufacturers
- Dedicated web portal [vwr.com/production](https://www.vwr.com/production)

**New bioprocessing chemicals - more
products, more options, more solutions**

VWR Chemicals can help YOU.....

The requirements and regulations faced by pharmaceutical manufacturers when purchasing chemicals, biological buffers, or biochemicals for bioprocessing production, increase in stringency and complexity on an almost daily basis.

For over 100 years VWR have been helping our customers manage their scientific challenges and grow their business. Our product quality, our supporting documentation, and our production expertise has evolved to anticipate market requirements. This means that we can supply you with products and support you streamline your production processes.



Wherever you are.....

Built on a foundation of supply chain innovation, our goal is for our customers to have a consistent and reliable experience wherever they are in the world.

VWR has an extensive global network in 34 countries including 14 distribution facilities across three continents for Good Distribution Practices (cGDP). These facilities are certified by a qualified outside auditor under International Pharmaceutical Excipient Council's (IPEC) guidelines:

- Atlanta, GA
- Boston, MA
- Chicago, IL
- Denver, CO
- Fresno, CA
- Houston, TX
- Singapore
- Briare, France
- Philadelphia, PA
- Portland, OR
- Toronto, Canada
- Manati, Puerto Rico
- Leuven, Belgium
- Dublin, Ireland
- Lutterworth, UK

OPERATIONAL EXCELLENCE

We have designed our customer-centric quality and security programmes to offer flexibility, reduce the complexity around meeting regulatory requirements, and manage risk.

- Quality and Change Notice Verification (CNV) processes
- Proactive risk-based audit programme of new and existing suppliers for corrective and preventive actions (CAPA)
- Regulatory compliance with necessary certification (quality, conformance and analysis) and safety data sheets readily available on vwr.com
- Collaborative planning, forecasting and replenishment (CPFR) process with dedicated critical materials care experts proactively manage all aspects of fulfillment
- Processes underpinned by innovative technology solutions
- VWR's local field-based technical experts across five continents to help you match your requirements to high quality suppliers of bioprocessing materials



Whatever you want....

VWR CUSTOM MANUFACTURING

Working with VWR Custom Manufacturing Services is like having an advisory panel and project team just beyond the door of your own production facilities.

Our scientists and process engineers will ensure the right processes and systems are used to meet your needs. Whether your product is in development or already commercialised, we can scale our systems appropriately. We provide an entire team of skilled professionals dedicated to offering you excellence in science and engineering, as well as quality assurance, operations and supply chain disciplines.



Liquid and powder manufacturing

- Custom formulations
- Synthesis of buffer compounds and derivatives
- Lab to production scale
- Dedicated facilities for biologicals



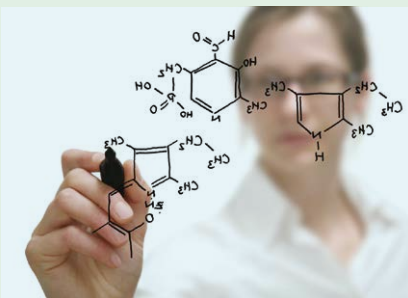
Dosing and packaging

- ISO class environments
- Aseptic processing
- Flexible packaging and fill/finish options
- Hazardous and sensitive material handling
- Automated production lines



Assembly and finishing

- OEM packaging and labelling
- Multi-component kit assembly
- Package and label design
- Label control and management



Product design and transfer

- Seamless transition of product and process
- Validation
- Equipment and method transfer



Quality control

- Custom testing and method validation
- Customised certificates and documentation
- Biological and analytical test capabilities



Quality assurance and regulatory

- ISO 9001; ISO 13485; FDA registered facilities
- Change control and full traceability
- Custom documents

Focus on your core business — let VWR take care of sourcing, production, testing and documentation of your chemicals

Products for the pharmaceutical industry

This is a selection of our raw materials and excipients for pharmaceutical production (compliance with the European Pharmacopoeia and/or other Pharmacopoeia are indicated in the specifications for each product).

Compendial and multi-compendial products

Description												
Pk	50	100	250	500	1	2,5	5	12	20	25	200	1000
Size	g/ml	g/ml	g/ml	g/ml	kg/l	kg/l	kg/l	kg/l	kg/l	kg/l	l	l
Acetic acid 100% Ph. Eur./USP					20102.292	20102.320				20102.463	20102.550	
Acetone Ph. Eur.					20165.298	20165.323	20165.367			20165.460		
Ammonium carbonate Ph. Franç					83516.290							
Ammonium sulphate NF/ACS/ endotoxin tested					6496.1000							
L(+)-Ascorbic acid Ph. Eur./ USP		83568.180			83568.290		83568.360			83568.460		
Barium sulphate, fine powder Ph. Eur.					21763.292		21763.463					
Bismuth (III) carbonate basic Ph. Eur.			83518.230									
Boric acid, crystallised Ph. Eur.					20181.294		20181.363			20181.465		
Calcium chloride dihydrate Ph. Eur./BP/USP/JP endotoxin tested					6495.1000					6495.9025		
Calcium chloride dihydrate Ph. Eur.					22322.295		22322.364			22322.466		
Citric acid, anhydrous, powder Ph. Eur.					20282.293		20282.362			20282.464		
Citric acid monohydrate, powder Ph. Eur.					85514.290		85514.360			85514.460		
Copper (II) sulphate 5 H ₂ O Ph. Eur.					83686.292		83686.361					
Dichloromethane stabilised Ph. Eur.					23365.290					23365.461	23365.552	
Diethyl ether stabilised Ph. Eur.					23819.298		23819.367			23819.460		
Dimethyl sulphoxide Ph. Eur.					83529.290							
EDTA disodium salt dihydrate Ph. Eur.					20309.296		20309.365					
Ethanol absolute Ph. Eur., USP					20816.298		20816.367			20816.470		
Ethanol 96% (v/v) Ph. Eur.					20905.296	20905.320	20905.365			20905.467		
Ethyl 4 amino benzoate Ph. Eur.	83530.150											
D(-)-Fructose Ph. Eur.					24282.290		24282.368			24282.461		
D-Galactose Ph. Eur./NF endotoxin tested					3441.1000		3441.5000			3441.9025		
Gelatine, powder Ph. Eur.			24360.233				24360.368					
D(+)-Glucose, anhydrous Ph. Eur., USP					2845045		284508W			284508W		
D(+)-Glucose monohydrate Ph. Eur.					24369.290					24369.461		
L(+)-Glutamic acid Ph. Eur.			20350.232									
Glycerine (glycerol) Ph. Eur.					24386.298		24386.367			24386.460		
Gum tragacanth Ph. Eur., USP, NF				24437.260								
Hydrochloric acid 37% Ph. Eur.					20255.290	20255.324	20255.368		20255.440			
Hydrogen peroxide 30% stabilised Ph. Eur.				23622.260		23622.330	23622.367			23622.467		
Iodine Ph. Eur.				24762.265								
Iron (II) sulphate heptahydrate Ph. Eur.					24246.295							
Lactic acid 90% Ph. Eur.					20370.297		20370.366					
Magnesium chloride hexahydrate Ph. Eur., BP, USP					87060.290		87060.360			87060.460		
Magnesium hydroxide Ph. Eur.					25059.295					25059.466		
Magnesium oxide heavy Ph. Eur.					83540.290							
Magnesium sulphate, dried USP					7154.1000							
Magnesium sulphate heptahydrate Ph. Eur.					25167.298		25167.367			25167.460		
Manganese (II) sulphate monohydrate Ph.Eur./USP					6512.1000			6512.9012				
D(-)-Mannitol Ph. Eur., USP					25311.297		25311.366			25311.468		



Description												
Pk	50	100	250	500	1	2,5	5	12	20	25	200	1000
Size	g/ml	g/ml	g/ml	g/ml	kg/l	kg/l	kg/l	kg/l	kg/l	kg/l	l	l
Methanol Ph. Eur., NF, BP						6520.2500				6520.9025		
DL Methionine Ph. Eur., USP					16236.297		16236.366					
Methyl 4-hydroxybenzoate Ph. Eur.					25604.290							
Orthophosphoric acid 85% Ph. Eur.					20626.292		20626.361			20626.463		
Paraffin, solidification point 52 - 54 °C, pellets Ph. Eur.					26157.291							
Paraffin, oil Ph. Eur. light							8577.5000					
Phenol, detached crystals Ph. Eur.					20596.297					20596.468		
Phenolphthalein Ph. Eur.		83544.180										
2-Phenoxyethanol Ph. Eur.					26244.290							
Polyvinylpyrrolidone 40000 (K30) Ph. Eur.					26617.291		26617.360					
Potassium acetate Ph. Eur.					85507.290							
Potassium chloride Ph. Eur., USP					26760.295		26760.364			26760.466		
Potassium dihydrogen phosphate, crystallised Ph. Eur.					26922.295		26922.364			26922.466		
di-Potassium hydrogen phosphate Ph. Eur.					26932.290		26932.368			26932.461		
L(+)-Potassium hydrogen tartrate Ph. Eur.							27057.361					
Potassium hydroxide, pellets Ph. Eur.					26670.294		26670.363			26670.465		
Potassium iodide Ph. Eur.			26850.230	26850.260	26850.296		26850.365					
Potassium permanganate, crystallised Ph. Eur.					26904.293					26904.464		
Potassium phosphate monobasic Ph. Eur./NF/BP endotoxin tested					26921.295		26921.364			26921.466		
Potassium sorbate, granules Ph. Eur.					26976.291					26976.462		
2-Propanol Ph. Eur., USP					20904.293	20904.320	20904.362			20904.465	20904.550	
Resorcinol Ph. Eur.					27379.294							
Salicylic acid, powder Ph. Eur.					20662.296					20662.467		
Silver nitrate Ph. Eur.		83517.180										
Sodium acetate trihydrate Ph. Eur.					27649.297					27649.468		
Sodium benzoate Ph. Eur.					83551.290		83551.360					
Sodium carbonate, anhydrous Ph. Eur.					27767.295							
Sodium carbonate decahydrate Ph. Eur.					27761.295							
Sodium chloride Ph. Eur.					27808.297		27808.366			27808.468		
tri-Sodium citrate dihydrate, crystallised Ph. Eur.					27831.297		27831.366			27831.468		
Sodium dihydrogen phosphate dihydrate Ph. Eur.					28014.291		28014.360					
Sodium fluoride Ph. Eur.					27859.293					27859.464		
Sodium hydrogen carbonate Ph. Eur.					27775.293		27775.362			27775.464		
di-Sodium hydrogen phosphate dihydrate Ph. Eur., USP					87010.290		87010.360			87010.460		
di-Sodium hydrogen phosphate dodecahydrate Ph. Eur.					28035.293		28035.362					
Sodium hydroxide, pellets Ph. Eur./NF/BP/JP					28248.298		28248.367			28248.460		
Sodium iodide Ph. Eur.					27916.291		27916.360			27916.462		
DL-Sodium lactate 50% in aqueous solution Ph. Eur.					27927.298							
Sodium sulphate, anhydrous, fine powder Ph. Eur./USP					28105.295		28105.364			28105.466		
Sodium sulphite, anhydrous Ph. Eur.					28125.294		28125.363			28125.465		

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Description	50	100	250	500	1	2,5	5	12	20	25	200	1000
Pk	g/ml	g/ml	g/ml	g/ml	kg/l	kg/l	kg/l	kg/l	kg/l	kg/l	l	l
di-Sodium tetraborate decahydrate Ph. Eur.					83555.290					83555.460		
D(+)-Sucrose (saccharose) Ph. Eur.					27483.294		27483.363			27483.465		
Sulphuric acid 96% Ph. Eur.					85508.290	85508.320						
Talc Ph. Eur.				83557.260								
L(+)-Tartaric acid, powder Ph. Eur.					83511.290		83511.360					
Thymol Ph. Eur.		83558.180										
D-Trehalose Ph. Eur./NF endotoxin tested					3599.1000		3599.5000			3599.9025		
Trichloroacetic acid, crystallised Ph. Eur.					20741.290							
Tris(hydroxymethyl) aminomethane (Tris, Trometamol) Ph. Eur., USP					87020.290		87020.360			87020.460		
Vaseline white Ph. Eur.					28908.290		8577.5000					
Water Ph. Eur., USP, NF, USP, NF, JP purified							90200.5000	90200.9010		90200.9025	90200.9200	90200.0999
Zinc stearate Ph. Eur.							83563.370					
Zinc sulphate heptahydrate Ph. Eur./USP					29158.294		29158.363					

Aqueous solutions for biopharma

Concentration	2,5 l	10 l	25 l	200 l	210 kg
Acetic acid 30%	6516.2500		6516.9025	6516.9200	
Acetic acid 1 mol	6517.2500		6517.9025		
Acetic acid 75%	6519.2500		6519.9025		6519.9200
Hydrochloric acid 1 mol	85447.320		85447.460		
Hydrochloric acid 2 mol	85399.320		85399.460		
Hydrochloric acid 5 mol	85400.320		85400.460		
Hydrochloric acid 6 mol	85401.320		85401.460		
Hydrochloric acid 10% Ph. Eur.		5594.9010			
Sodium hydroxide 0,1 mol/l	85519.320		85519.460		
Sodium hydroxide 0,5 mol/l	85520.320		85520.460		
Sodium hydroxide 2 mol/l	85521.320		85521.460		
Sodium hydroxide 6 mol/l	85522.320		85522.460		
Sodium hydroxide 25%	85523.320		85523.460		
Sodium hydroxide 50%	85524.320		85524.460		

Amino acids and derivatives

Substance	100 g	1 kg	5 kg	25 kg
Asparagine, anhydrous	15005.180	15005.297	15005.366	15005.468
L-Cystine dihydrochloride	21502.180	21502.297	21502.366	21502.468
Hypoxanthine disodium salt	31608.180	31608.297	31608.366	31608.468
Hypoxanthine sodium salt	31752.180	31752.297	31752.366	31752.468
L-Lysine, anhydrous	42307.180	42307.297	42307.366	42307.468
L-Tyrosine disodium dihydrate	87058.180	87058.297	87058.366	87058.468

Biological buffers

Description	1 kg	5 kg	25 kg
HEPES free acid	30487.297	30487.366	30487.468
HEPES sodium salt	30567.297	30567.366	30567.468
PIPES free acid	73007.297	73007.366	73007.468
PIPES sesquisodium salt	73257.297	73257.366	73257.468
PIPES disodium salt	73305.297	73305.366	73305.468
TRIS hydrochloride	85827.297	85827.366	85827.468

Carbohydrates

Description	500 g	1 kg	5 kg	25 kg
Glucose anhydrous Ph. Eur., USP	2845045		284508W	284508F
Glucose hydrated Ph. Eur.		24369.290	24369.368	24369.461
Fructose Ph. Eur.		24282.290	24282.368	24282.461
D-Galactose Ph. Eur./NF endotoxin tested		3441.1000	3441.5000	3441.9025
D-Trehalose Ph. Eur./NF endotoxin tested		3599.1000	3599.5000	3599.9025
Mannitol Ph. Eur., USP		25311.297	25311.366	25311.468
D(+)-Saccharose Ph. Eur.		27483.294	27483.363	27483.465



We Set Science in Motion to Create a Better World.

From breakthrough discovery to agile delivery of innovative products and services, Avantor® and VWR are one company.

Our shared vision: to be your trusted partner, providing discovery-to-delivery solutions for our global life sciences and advanced technology customers.

Learn more about our new company at www.SettingScienceinMotion.com

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ENABLING YOUR PROCESS WITH INNOVATIVE CHOICE



VWR Life Science Seradigm

- Foetal bovine serum
- Supply assurance
- Quality assurance measures at source
- Multiple lot testing
- Fully certified supply chain for traceability by the International Serum Industry Association (ISIA)
- Consistent, reliable performance

Production chemicals

- Biological buffers
- Carbohydrates
- Inorganic salts
- Media and additives
- Proteins and amino acids
- Excipients
- VWR custom manufacturing services
- Strategic sourcing
- cGMP-compliant warehousing

VWR single-use solutions

- Standard and custom products
- Buffer and media transfer
- Sterile filtration
- Bioreactor feed and harvest
- Bulk drug substance
- Aseptic sampling and filling
- 2-D/3-D bag assemblies and tank liners
- Application-specific connections
- Sampling methods
- Mixing vessels

Controlled environment

- Reusable and disposable garments
- Gloves and fingercots
- Wipes and swabs
- Detergents and disinfectants
- Cleaning systems
- Mats and flooring
- Labelling and documentation
- Environmental monitoring
- Equipment for contamination control (biosafety cabinets, tubing, etc)

vwr.com/production

Easy access to products featured here as well as our large range of products including cleanroom supplies, monitoring, cleaning, and single-use solutions for production and everything for laboratories.

- Catalyst support services for drug manufacturers
- Covers everything from research to end-product quality assurance
- Products and application data
- Safety data sheets
- Regulatory documentation

Online enquiry, quotation requests and direct purchasing functionality.



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Austria

VWR International GmbH
Graumannsgasse 7
1150 Wien
Tel.: +43 1 97 002 0
Email: info.at@vwr.com

Belgium

VWR International bvba
Researchpark Haasrode 2020
Geldenaaksebaan 464
3001 Leuven
Tel.: +32 (0) 16 385 011
Email: vwr.be@vwr.com

Czech Republic

VWR International s. r. o.
Veetee Business Park
Pražská 442
CZ - 281 67 Stříbrná Skalice
Tel.: +420 321 570 321
Email: info.cz@vwr.com

Denmark

VWR International A/S
Tobaksvejen 21
2860 Søborg
Tel.: +45 43 86 87 88
Email: info.dk@vwr.com

Finland

VWR International Oy
Valimotie 9
00380 Helsinki
Tel.: +358 (0) 9 80 45 51
Email: info.fi@vwr.com

France

VWR International S.A.S.
Le Périgares – Bâtiment B
201, rue Carnot
94126 Fontenay-sous-Bois cedex
Tel.: 0 825 02 30 30* (national)
Tel.: +33 (0) 1 45 14 85 00
(international)
Email: info.fr@vwr.com
* 0,18 € TTC/min

Germany

VWR International GmbH
Hilpertstraße 20a
D - 64295 Darmstadt
Tel.: 0800 702 00 07* (national)
Tel.: +49 (0) 6151 3972 0 (international)
Email: info.de@vwr.com
*Freecall

Hungary

VWR International Kft.
Simon László u. 4.
4034 Debrecen
Tel.: +36 52 521130
Email: info.hu@vwr.com

Ireland / Northern Ireland

VWR International Ltd / VWR International (Northern Ireland) Ltd
Orion Business Campus
Northwest Business Park
Ballycoolin
Dublin 15
Tel.: +353 (0) 1 88 22 222
Email: sales.ie@vwr.com

Italy

VWR International S.r.l.
Via San Giusto 85
20153 Milano (MI)
Tel.: +39 02 3320311
Email: info.it@vwr.com

The Netherlands

VWR International B.V.
Postbus 8198
1005 AD Amsterdam
Tel.: +31 (0) 20 4808 400
Email: info.nl@vwr.com

Norway

VWR International AS
Haavard Martinsens vei 30
0978 Oslo
Tel.: +47 22 90 00 00
Email: info.no@vwr.com

Poland

VWR International Sp. z o.o.
Limbowa 5
80-175 Gdansk
Tel.: +48 58 32 38 200
Email: info.pl@vwr.com

Portugal

VWR International - Material de Laboratório, Lda
Centro Empresarial de Alfragide
Rua da Indústria, nº 6
2610-088 Alfragide
Tel.: +351 21 3600 770
Email: info.pt@vwr.com

Spain

VWR International Eurolab S.L.
C/ Tecnologia 5-17
A-7 Llinars Park
08450 - Llinars del Vallès
Barcelona
Tel.: +34 902 222 897
Email: info.es@vwr.com

Sweden

VWR International AB
Fagerstagatan 18a
163 94 Stockholm
Tel.: +46 (0) 8 621 34 00
Email: kundservice.se@vwr.com

Switzerland

VWR International GmbH
Lerzenstrasse 16/18
8953 Dietikon
Tel.: +41 (0) 44 745 13 13
Email: info.ch@vwr.com

UK

VWR International Ltd
Customer Service Centre
Hunter Boulevard - Magna Park
Lutterworth
Leicestershire
LE17 4XN
Tel.: +44 (0) 800 22 33 44
Email: uksales@vwr.com

China

VWR International China Co., Ltd.
Shanghai Branch
Room 256, No. 3058 Pusan Road
Pudong New District
Shanghai 200123
Tel.: +86 21 5898 6888
Email: info_china@vwr.com

India

VWR Lab Products Private Limited
No.139, BDA Industrial Suburb,
6th Main, Tumkur Road, Peenya Post,
Bangalore, India – 560058
Tel.: +91 80 28078400
Email: vwr_india@vwr.com

Singapore

VWR Singapore Pte Ltd
18 Gul Drive
Singapore 629468
Tel.: +65 6505 0760
Email: sales.sg@vwr.com