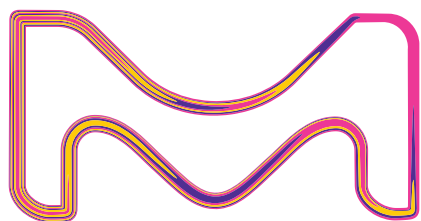


THE FORMULA FOR STABILITY

High-quality excipients for
your plasma-derived products.



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

SAFC[®]

Pharma & Biopharma Raw
Material Solutions

Quality for your formulation, stability for your products.

To solve the challenge of stability requirements in plasma applications, we offer a wide range of high-quality pharmaceutical excipients that allow you to formulate and manufacture stable plasma products. These include pH adjustment agents, mineral salts, and stabilizers. Most of our products are available in innovative packagings, such as double PE sacks for clean-room manufacturing and our DRYPOUR® system, designed to minimize caking.

We also offer a broad range of purification products suitable for different process steps in your plasma production. This includes the Eshmuno® P Chromatography Resins, which are designed for the removal of anti-A and anti-B antibodies from plasma-derived immunoglobulin (Ig). We provide high-quality products and expertise to help you overcome obstacles and challenges in your plasma process.

Curious? Find out more: [MerckMillipore.com/plasma](https://www.merckmillipore.com/plasma)

Glycine: high-quality stabilizer for plasma products.

Now dry-granulated for better processability.

Discover our new, innovative granulated glycine. Its reduced caking behavior leads to better flowability, which facilitates handling and processing.

- Dry-granulated without any additives
- Free-flowing
- Available in big bags
- Low microbial and endotoxin load
- In compliance with Ph. Eur., BP, JP, and USP
- Emprove® documentation and EXCIPACT™ certificate

pH Adjustment and Buffers

100056	Acetic acid (glacial) 100% EMPROVE® ESSENTIAL Ph Eur, BP, JP, USP, E 260
100058	Acetic acid 96% EMPROVE® ESSENTIAL
137035	Acetic acid 1 mol/L EMPROVE® EXPERT
137047	Acetic acid 30% EMPROVE® EXPERT Ph Helv
137046	Sodium acetate anhydrous suitable for the biopharmaceutical production EMPROVE® bio USP
137012	Sodium acetate trihydrate suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, USP
137002	Citric acid anhydrous powder suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, USP, ACS
137003	Citric acid monohydrate cryst. suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, USP, ACS
106666	tri-Sodium citrate dihydrate low in endotoxins EMPROVE® API Ph Eur, BP, JP, USP
137042	tri-Sodium citrate dihydrate cryst. suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, USP, ACS
100563	ortho-Phosphoric acid 85% EMPROVE® ESSENTIAL Ph Eur, BP, JPE, NF, E 338
105032	Potassium hydroxide pellets EMPROVE® ESSENTIAL Ph Eur, BP, JP, NF, FCC, E 525
137010	Potassium dihydrogen phosphate anhydrous suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, USP
137039	di-Potassium hydrogen phosphate cryst. suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JPC, NF
104956	tri-Potassium citrate monohydrate EMPROVE® ESSENTIAL Ph Eur, BP, USP, FCC, E 332
137020	Sodium hydroxide pellets suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, NF
137031	Sodium hydroxide solution 1 mol/L EMPROVE® EXPERT
137093	Sodium dihydrogen phosphate monohydrate suitable for the biopharmaceutical production EMPROVE® bio BP, USP
137018	Sodium dihydrogen phosphate dihydrate suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, USP, JPE
106585	di-Sodium hydrogen phosphate anhydrous EMPROVE® ESSENTIAL Ph Eur, BP, USP, JPE, E 339
137036	di-Sodium hydrogen phosphate dihydrate suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, USP
137092	di-Sodium hydrogen phosphate heptahydrate suitable for the biopharmaceutical production EMPROVE® bio DAC, USP
106573	di-Sodium hydrogen phosphate dodecahydrate cryst. EMPROVE® ESSENTIAL Ph Eur, BP, JP, USP
106577	tri-Sodium phosphate dodecahydrate EMPROVE® ESSENTIAL NF, E 339
100312	Hydrochloric acid 25% EMPROVE® ESSENTIAL Ph Helv
100314	Hydrochloric acid fuming 37% EMPROVE® ESSENTIAL Ph Eur, BP, JP, NF
110165	Hydrochloric acid 1 mol/L EMPROVE® EXPERT
108307	Tris(hydroxymethyl)aminomethane (Trometamol) high purity suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JPC, USP, ACS
108386	Tris(hydroxymethyl)aminomethane (Trometamol) suitable for use as excipient EMPROVE® exp Ph Eur, BP, JPC, USP
108219	Tris(hydroxymethyl)aminomethane hydrochloride suitable for the biopharmaceutical production EMPROVE® bio
104352	L-Histidine suitable for use as excipient EMPROVE® exp Ph Eur, USP, JP
104354	L-Histidine monohydrochloride monohydrate suitable for use as excipient EMPROVE® exp Ph Eur, BP, JP

Stabilizers

103669	Glycine granulated EMPROVE® EXPERT Ph Eur, BP, JP, USP
100590	Glycine cryst. suitable for use as excipient EMPROVE® exp Ph Eur, BP, JP, USP
112488	N-Acetyl-DL-tryptophan suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP
101700	L-Alanine EMPROVE® ESSENTIAL Ph Eur, USP
101544	L-Arginine monohydrochloride suitable for use as excipient EMPROVE® exp Ph Eur, BP, JP, USP
101587	L-Arginine suitable for use as excipient EMPROVE® exp Ph Eur, JP, USP
105701	L-Lysine monohydrochloride suitable for use as excipient EMPROVE® exp Ph Eur, BP, USP
107430	L-Proline EMPROVE® ESSENTIAL Ph Eur, USP
101791	L-Glutamic acid EMPROVE® ESSENTIAL Ph Eur, JP
106445	Sodium L-glutamate monohydrate EMPROVE® ESSENTIAL FCC, NF, E 621
104090	Glutathione (reduced) suitable for the biopharmaceutical production EMPROVE® bio Ph Eur
137048	D(+)-Glucose anhydrous suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, USP, ACS
137096	D(-)-Mannitol EMPROVE® EXPERT Ph Eur, BP, USP, JP
105911	Maltose monohydrate EMPROVE® ESSENTIAL
111597	Parteck® SI 400 LEX (Sorbitol) suitable for use as excipient EMPROVE® exp Ph Eur, BP, NF, JP
100892	Sucrose low in endotoxins suitable for use as excipient EMPROVE® exp Ph Eur, BP, JP, NF
817081	Sodium caprylate suitable for use as excipient EMPROVE® exp Ph Eur, NF
100193	Caprylic acid (Octanoic acid) suitable for the biopharmaceutical production Ph Eur, NF manufactured or purified under GMP in consistent high purity Ph Eur

Mineral Salts

137017	Sodium chloride suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, USP
137008	Magnesium chloride hexahydrate cryst. suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, USP, JPC, ACS
137101	Calcium chloride dihydrate suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, USP
137009	Potassium chloride suitable for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, USP, JP
137004	TITRIPLEX® III (ethylenedinitrilotetraacetic acid disodium salt dihydrate) suitable for for the biopharmaceutical production EMPROVE® bio Ph Eur, BP, JP, USP, ACS
101816	Ammonium sulfate suitable for the biopharmaceutical production EMPROVE® bio ACS, NF

Surfactants and Polymers

817072	Tween® 20 (Polysorbate) EMPROVE® ESSENTIAL Ph Eur, JPE, NF
817061	Tween® 80 (Polysorbate) EMPROVE® ESSENTIAL Ph Eur, JP, NF
817006	Polyethylene glycol 4000 (powder) EMPROVE® ESSENTIAL Ph Eur
817007	Polyethylene glycol 6000 EMPROVE® ESSENTIAL Ph Eur
137112	Poloxamer 188 EMPROVE® EXPERT (stabilized with 70 ppm BHT) Ph Eur, NF

Solvents and Detergents

100002 Tri-n-butyl phosphate suitable for biopharmaceutical production EMPROVE® bio Ph Eur

108643 Triton® X-100 suitable for the biopharmaceutical production EMPROVE® bio Ph Eur

100967 Ethanol 96% suitable for use as excipient EMPROVE® exp Ph Eur, JP, USP

100971 Ethanol 96% suitable for use as excipient EMPROVE® exp Ph Eur, BP

100986 Ethanol absolute suitable for use as excipient EMPROVE® exp Ph Eur, BP, JP, USP

105008 2-Propanol suitable for preparative chromatography EMPROVE® bio Ph Eur, BP, USP

Preservatives

100201 Phenol EMPROVE® ESSENTIAL Ph Eur, ChP, JP, USP

817043 Thimerosal Ph Eur, BP

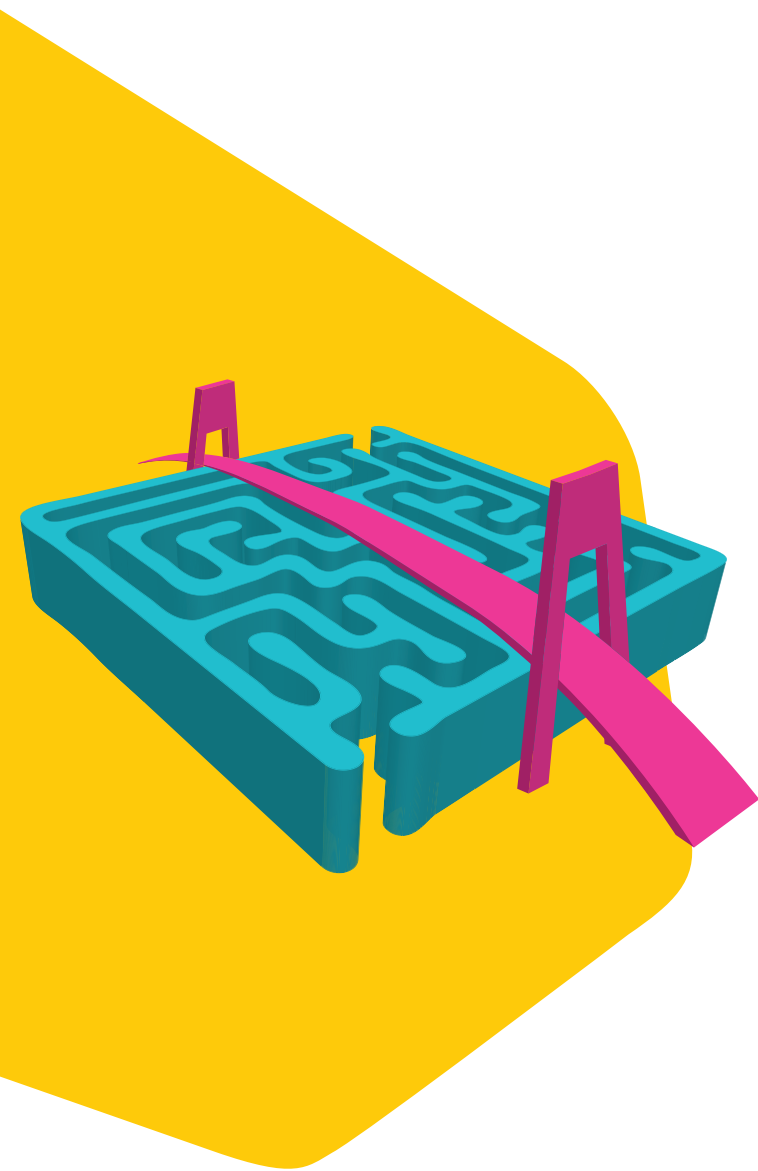
100987 Benzyl alcohol special grade (benzaldehyde ≤0.05%) suitable for use as excipient EMPROVE® exp Ph Eur, BP, JP, NF

THE EMPROVE® PROGRAM

Your fast track through regulatory challenges.

Ensuring the compliance of your pharma and biopharma products involves the compilation of a vast amount of data, which can be time- and resource-intensive. In order to facilitate and accelerate this process, we developed our Emprove® Program. It includes 400 pharma raw and starting materials and a selection of filtration and single-use products. Each product in the portfolio is complemented with three different types of dossiers supporting you throughout the different stages of your operations: qualification, risk assessment, and process optimization – all designed to help you speed your way through the regulatory maze.

Find out more at: MerckMillipore.com/emprove



The logo for SAFC, featuring the letters 'SAFC' in a bold, sans-serif font, followed by a registered trademark symbol (®).

Pharma & Biopharma Raw
Material Solutions

The typical technical data above serve to generally characterize the excipient. These values are not meant as specifications and they do not have binding character. The product specification is available separately, from the website **MerckMillipore.com**

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