

Spotlight Biopharma Processing



Biesterfeld

We are your specialist in high quality products and technical support for the healthcare industry.

We understand the complexity of pharmaceutical, nutraceutical and medical device product development. Our product portfolio contains high performance materials with innovative features that comply with current regulations. This includes Antifoaming Solutions, Glucose and Glucose derivatives as carbon source in cell-culture media, PET foils used to manufacture cell-culture bags, Kromasil silica-based resins for normal phase HPLC purification, Silicone Tubing solutions for up- and downstream biopharma processing as well as Ultra-Low Temperature resistant TPE tubing solutions for cold-chain biopharma processing as viral vectors, mRNA, etc.

You will find our products in pharmaceutical production as a component of finished dosage forms, as part of their packaging as well as in medical devices.



Lab & Innovation Centre

In our Lab and Innovation Centre in Hamburg we have the possibility to support the development of tailored solutions together with our customers. We can serve different example formulations which can be a good starting point for your project. Through the addition of additives from our wide ranging portfolio also existing formulations can be enhanced.

If you have an idea for a project get in touch:
Medical@biesterfeld.com



Modern biopharmaceutical processing encompasses a broad variety of methods and strategies to implement successful R&D approaches and subsequently reliable manufacturing processes.

This methodical toolbox for scientists and engineers is under continuous development in order to create new solutions and capabilities. This includes upstream processing, such as fermentation, or downstream processing, like clarifying, purifying and concentrating the final product, all the way up to fill & finish.

While this toolbox is essential to the biopharmaceutical industry, raw materials and consumables like process aids or single-use systems are just as important. These physical tools employed in biopharmaceutical processing are subject to a very strict and ever evolving quality and regulatory framework, ensuring the highest patient safety possible. Therefore, single-use systems and process aids must meet and exceed the Q&R industry standards.

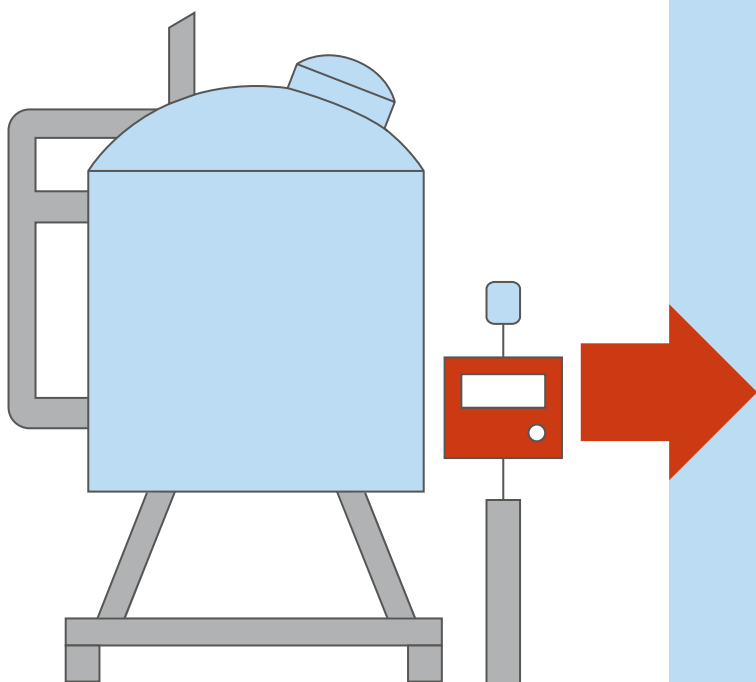


Together with our trusted partners who are industry leaders for their respective field of expertise, Biesterfeld LifeSciences provides a broad portfolio including state of the art products, which support our customers all the way, from R&D to the fully packaged drug.

Our Partners for Pharma Processing:



Fermentation



Antifoam Emulsions

- › Liveo™ Medical Antifoam C Emulsion
- › Liveo™ Q7-9120, 30% Dimethicone Emulsion



Defoaming Surfactants

- › Adeka NOL LG-109
- › Adeka NOL LG-126



Sucrose, Dextrose and Glucose

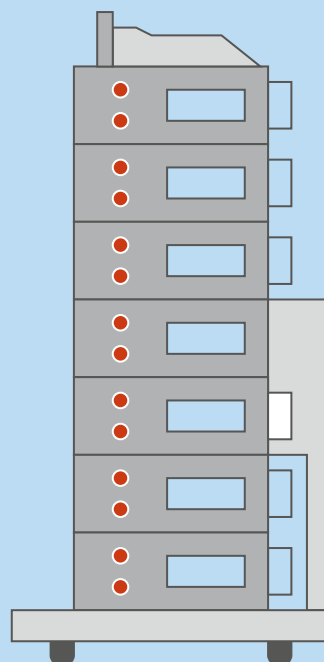
- › Meridex, Meridex Pharma
- › Meritose 200 Pharma



Foils for bag manufacturing

- › Mylar PET polyester film
- › Packaging material for transport between pharma processing steps

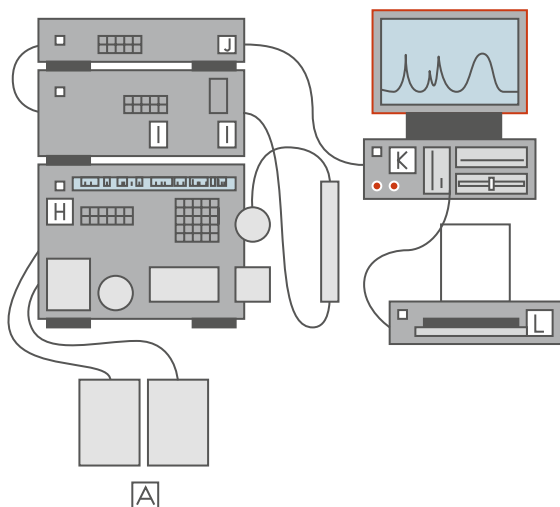
Clarification



Tubings for fluid transfer

- › Liveo™ Pharma 50, 65, 80 Tubings
- › Liveo™ Pharma 65 reinforced Tubings
- › Liveo™ Pharma TPE Tubings

Purification



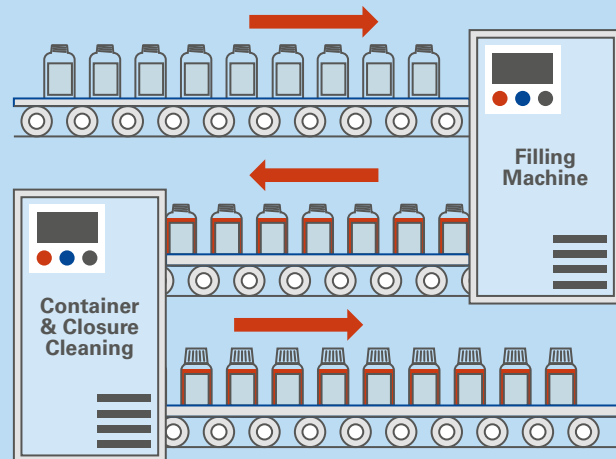
Tubings for fluid transfer

- › Liveo™ Pharma 50, 65, 80 Tubings
- › Liveo™ Pharma 65 reinforced Tubings
- › Liveo™ TPE Tubings

Kromasil®

- › Silica-based resins for purifying small molecules, peptides and biologics
- › Available in bulk and as prepacked columns
- › Ideally suited for e.g. GLP-1 antagonist purification

Fill & Finish



Tubings for fill & finish applications

- › Liveo™ Pharma APT Tubings
- › Liveo™ Pharma TPE Tubings
- › Liveo™ Pharma Ultra-Low Temp TPE Tubing

Antifoams for fill & finish applications

- › Liveo™ Medical Antifoam C
- › Liveo™Q7-2587 Sim. Emulsion

Cooperation with machine producers

Silicone Tubing

Product	Description	Grade
Pharma Tubing 50 Shore A 65 Shore A 80 Shore A	Platinum-cured silicone tubing For high purity pharmaceutical fluid transfer and filling applications	EP 3.1.9. "Silicone elastomer for closures and tubing" USP Class VI, FDA and ISO criteria cGMP
Pharma Reinforced Tubing 65 Shore A	Platinum-cured silicone tubing Fiberreinforced tubing for high-pressure and vacuum applications	
Pharma Advanced Pump Tubing	Specifically formulated platinum-cured silicone tubing for peristaltic pump applications Providing up to six times the pump life of standard platinum-cured silicone tubing	

- › Pharmaceutical grade silicone tubing
- › For high purity pharmaceutical & biotechnological fluid transfer and filling application
- › Increased kink and pressure resistance with higher durometers
- › Extruded from Liveo™ brand BioMedical Grade Elastomer

TPE Tubing

Product	Description	Grade
Pharma TPE Tubing 65 Shore A	Sterilizable, weldable TPE tubing for Single-use assemblies and Peristaltic pump applications Contains no peroxide by products, Chlorophenyls or PCBs	USP Class VI Plastics Test FDA and ISO criteria cGMP Class 7 clean room
Pharma Ultra-Low Temp TPE Tubing 62 Shore A	Sterilizable, weldable TPE tubing for biopharmaceutical processing applications that require lower storage temperatures. Improved elastomer toughness down to -86°C; resistant to multiple freeze/thaw cycles; High ductility; reduced brittle failure; resistant to bend, crush and impact at -80°C	USP Class VI ISO criteria cGMP Class 7 clean room

- Pharmaceutical grade TPE tubing
- For transferring of ultra-pure liquids, air or steam in pharmaceutical and biotechnological manufacturing process
- High tensile strength and Burst resistance pre and post welding
- Made from Medical Grade elastomer that complies to USP Class VI Plastics Tests Requirements

Simethicone Emulsion

Product	Description	Grade
Liveo™ Q7-2587 30% Simethicone Emulsion USP	Water-dilutable emulsion containing 30% Simethicone compound by weight with less than 2% of low-molecular-weight volatile silicone substances.	USP
Liveo™ Medical Antifoam C Emulsion	Water-dilutable emulsion containing 30% Simethicone compound by weight and methylcellulose.	

- ICH Q7 GMP
- Foam control for pharmaceutical application and formulation

Adeka

Defoaming Surfactants

Product	Description	Grade
ADEKA NOL LG-109	Water soluble polyether type antifoaming agent designed for removing biological fermentation foam. Stable against high temperature.	For use in pharmaceutical processing
ADEKA NOL LG-126	Water soluble polyether type antifoaming agent designed for removing biological fermentation foam and suitable for various washing steps. Stable against high temperature and alkali.	

- › Bio-based polyether type antifoaming agent
- › Process aid in the production of pharmaceuticals and cosmetics
- › Fermentation processes (e.g. of astaxanthin, EPA/DHA, amino acids and yeast)

Tereos

Sucrose, Dextrose, and Glucose

Product	Description	Grade
Granulated Sugar N°1 Extra Fine Caster Sugar Pure Icing Sugar	Protein stabilizer, cryoprotectant, lyoprotectant, bulking agent, tonicity adjustment in biologics and vaccines.	EP Sucrose / USP-NF Sucrose
Meridex Meridex PF	Carbon source and tonicity agent for sensitive parenteral applications.	Glucose Monohydrate Ph. Eur. / Dextrose USP-NF
Meritose 200 Pharma	Nutrient/energy source in cell culture media; sometimes tonicity modifier.	Glucose Monohydrate Ph. Eur. / Dextrose USP-NF

- › Quality system based on IPEC-PQG GMP for pharmaceutical excipients

Nouryon Kromasil®

Silica-based Resins

Product	Description	Type
Kromasil® Column Bulk	Silica-based stationary phases for analytical and preparative HPLC	Reversed Phase (C4, C8, C18) Normal Phase (NH2, CN, Diol)

- › Superior stability against mechanical stress = improved longevity = more sustainability
- › Bigger and smoother surface = more efficiency and better resolution
- › Identical properties and quality of different particle size = seamless scale-up

Contact

For more information feel free to reach to the
Healthcare experts at Biesterfeld at

Medical@biesterfeld.com

Keep up with what's shaping BioPharma

Keep up with what's shaping the industry!
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trends, ingredient innovations, market
developments and expert perspectives.
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