



biowest
The Serum Specialist



Your local distributor



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Serum

Cell Culture Media

Salt Solutions

Antibiotics

Cell Culture Reagents
& other products



Company Profile

Performance

Founded in 1987, Biowest is the European leader in the collection of animal sera, offering the widest range of sera and media for cell culture available on the market. Our products are in use throughout the academic, industrial and government research

sectors, in fields spanning cell biology, genomics, proteomics, virology, immunology, drug discovery and toxicology.

Our people around the world work with a strong commitment to quality, reproducibility, traceability and service.

Combined with our competitive prices and our complete range of origins, these are the reasons for our success.



The quality of our processes and products is internationally recognized, which allows us to accede to the most selective markets such as China and Japan.

Serum

Cell Culture Media

Salt Solutions

Antibiotics

Cell Culture Reagents & other products

3

Biowest, a partner in scientific breakthroughs

Dr Shinya Yamanaka won the Nobel Prize 2012 in the fields of genetics "for the discovery that mature cells can be reprogrammed to become pluripotent". He studied genes that are important for stem cell function. When he transferred four such genes into cells taken from the skin, they were reprogrammed into pluripotent stem cells that could develop into all cell types of an adult mouse. He named these cells induced pluripotent stem (iPS) cells.

The FBS used in this project was from Chile and Mexico, delivered by Japan BioSerum, working with Biowest for sourcing, processing and batch selection.

Read the complete Nobel Award article on www.biowest.net



*Dr Shinya Yamanaka,
The Nobel Prize,
uses Biowest products*

Vertical integration and complete security

Biowest controls the production of the sera throughout the entire process, from the collections around the world, to the final shipment of bottled serum from our warehouse, thus guaranteeing a vertically integrated system of production and documentation.

Using specialized equipment and detailed SOP audits, Biowest ensures the quality at every stage, thereby securing a consistently high quality with low intra-lot variation.

Worldwide sources of sera and widest range of products

Biowest is the ideal partner for both researchers and biopharmaceutical companies. We offer a wide range of geographical origins of bovine sera.

It is important to choose the right serum origin. The choice of origin can be important and may depend on local regulations.

Biowest is your guarantee of the best choice of serum origin and specifications, adjusted to your needs.

Quality system

Biowest guarantees the best quality : We are ISO 9001 and ISO 13485 certified. Biowest is registered by the French Ministry of Agriculture (regulation (EC) n° 1069 / 2009) under the agreement n° FR 49.231.001 for the production of animal sera.

According to the European Regulation EC n° 999/2001 , european animals are tested for BSE before the corresponding blood is allowed to be processed.

The EU is a pioneer in BSE testing and individual identification of animals through ear tagging, which ensures the best possible traceability and the lowest BSE risk and makes the EU origin the first choice for researchers in Japan and other selective markets.

Working on your request

With our outstanding knowledge in cell culture products, biowest has the special know-how to support special customer needs. According to the specific aspects of your research, our R&D laboratory can customize our formulations. We can define together every aspect of your custom made product from the beginning to the end.



WHY BIOWEST ?

- Quality and Service
- Auditability and Traceability
- Dedication and Commitment
- Compliance and Transparency

Serum

Cell Culture Media








Salt Solutions

Antibiotics

Cell Culture Reagents
& other products

SERUM

LEGEND

State:	 Liquid	 Powder	 Frozen
Storage and shipping conditions:	 Room Temperature	 +8°C	 -20°C
Shelf life, in months:	 24 m		

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Serum

Cell Culture Media

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& other products

About serum

Traceable to the Source

When scientists select their sera, an important factor taken into consideration is the source. Therefore, traceability of the serum is of paramount importance.

Biowest Fetal Bovine Serum is derived from clotted whole blood, aseptically collected from bovine foetuses via cardiac puncture. Each manufactured batch is rigorously controlled, from the collection of the serum and throughout all stages of its treatment and production, through to final packaging on our premises. The product is analyzed, classified, and tested by Biowest before shipped to customers all over the world.

Our Quality System can trace raw materials back to the original supplier and slaughterhouse where they were collected. Biowest's system of vertical integration provides certainty of origin and traceability of all Sera.

Biowest Quality

FBS "quality" is defined in relation to growth promotion characteristics of a specific cell line when cultured in our sera. A batch of FBS which works well for one cell line may not work well for another cell line. Biowest customers can purchase FBS after performance-testing of a sample. There are thousands of different cell lines and no two batches of FBS are identical ; we therefore offer a Sample and Reserve policy. Each batch is delivered with a Certificate of Analysis.

Serum - Batch Reservations

Biowest is pleased to provide free samples of different batches combined with batch reservations during the test period, for up to 4 to 6 weeks. The general sample size for FBS is 50 ml / batch.

After batch testing, the reservation must be confirmed with a first order.

For customers who do not have ample storage facilities, we can store the reserved batch up to 12 months, combined with scheduled shipments.

Technical Support

Biowest's experienced Technical Service Staff is available to answer questions regarding our quality control and all Biowest products.

> We aim to provide timely, courteous and professional service.

Worldwide Sourcing

Biowest offers a wide range of sources from countries with excellent veterinary status. This includes sources from South America, as well as European Union (EU) and United States Department of Agriculture (USDA) approved sources. The choice of the FBS source is determined by import requirements and available supply for the different markets.

Biowest is the ideal partner for academic researchers and biopharmaceutical companies who select FBS based on origin and performance.

European Directorate for the Quality of Medicines

EDQM certified FBS is your guarantee that the origin and the manufacturing process of the product have been certified by the European Directorate for the Quality of Medicines & HealthCare. The EDQM protects and promotes

public and animal health in Europe. Its mission is to contribute to the basic human right of access to good quality medicines and healthcare, and to promote and protect human and animal health, by establishing and providing official standards for the manufacture and quality control of medicines valid in all the signatory states of the Convention for the Elaboration of a European Pharmacopoeia.

Biowest can provide sterile filtration and packaging of FBS in its own facility that meets the criteria described in the current version of the product monograph, without the risk of transmitting agents of animal spongiform encephalopathies, n° 1483 of the European Pharmacopoeia. This is certified by the EDQM.

The countries of origin of EDQM certified serum are Panama, Costa Rica, Uruguay, Paraguay, Brazil, Chile and Mexico.

Filtration and Packaging

Raw pooled serum is filtered, through a triple series of 0.1 micron, sterilizing filters for FBS for example. The sterile serum is true-pooled to ensure homogeneity.

Biowest products are packaged via an aseptic filling process for which each step has been carried out to ensure the production of a product meeting the industry sterility standard assurance level of 10^{-4} (i.e., product that demonstrates a bacterial and fungal contamination level of no more than 1 of 10,000 units during the manufacturing process). The highest level of sterility assurance ($\geq 10^{-6}$) cannot be achieved without terminal sterilization. Filtration and dispensing are performed within positive pressure, HEPA-filtered, environmentally controlled rooms.

> **FBS Final Filter Size : Triple 0.1 micron**

Sterility

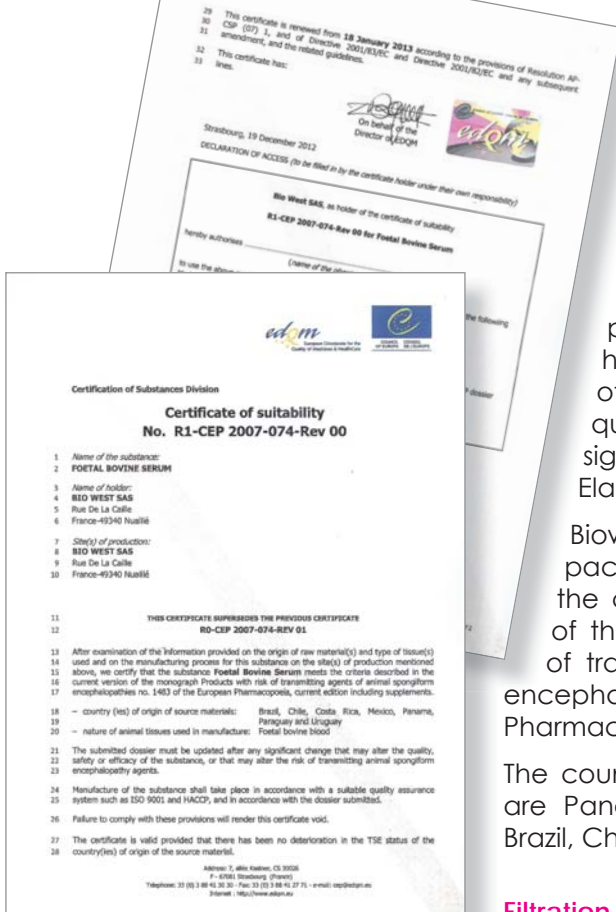
All sera are tested for the absence of aerobic and anaerobic bacteria, fungi and yeast.

The sterility test procedure is based on the European Pharmacopoeia or US Pharmacopoeia depending on the location of final filtration.

Products are dispensed via an aseptic process to ensure that all Biowest products achieve the highest Sterility Assurance Level. A representative number of samples from each production batch is selected for Sterility testing.

Mycoplasma

Each final product batch is tested for the absence of mycoplasma. The sera are tested for the absence of Mycoplasma utilizing a cell culture assay in Axcell Biotechnologies media by culture method. Our test is accurate within the limits of the detection method used.



Virus Testing

Each batch of serum is tested for adventitious viruses using cell culture techniques.

The serum is tested for:

- Bovine Viral Diarrhoea (BVD)
- Infectious Bovine Rhinotracheitis (IBR)
- Parainfluenza Type 3 (PI3)

Sera are tested for the absence of the indicated viruses by inoculation with GBK cells. The detection of virus is made by indirect immunofluorescence.

Antibody Testing : presence of specific antibodies is detected utilizing an ELISA Assay. The serum from equidea is tested for the presence of Equine Infectious Anemia antibodies.

Cell Culture Testing

Each batch of serum is tested for its ability to support in vitro growth of specific cell lines. Therefore, in addition to verifying that each batch of sera passes our exacting quality control specifications, three important performance criteria are evaluated in our Quality Control Program :

- Growth Promotion
- Cloning Efficiency
- Plating Efficiency

Biological performance is assessed using cell culture medium supplemented with a final concentration of 10% serum. During the test period, cultures are examined microscopically for any morphological abnormalities that may indicate toxic components in the serum.

The following cell lines are utilized to determine growth promotion and functionality :

Cell Line	Type	Species
HELA	Cancer	Human
L929	Fibroblast, Macrophage	Mouse
SP2/0-AG14	Lymphoma	Mouse
MRC-5	Lung	Human

Haemoglobin

A quantitative and colorimetric assay is performed to determine the residual haemoglobin concentration in each product batch.

Endotoxin Test (LAL)

All sera are tested to determine and quantify endotoxin levels. Biowest conducts a chromokinetic (quantitative test) method D of the European Pharmacopoeia.

Total Protein

Protein detection	Methodology
Protein	Biuret Colorimetry
Albumin	Immunoturbidimetry
Globulin	Immunoturbidimetry

Osmolality

Osmolality is determined by a lowered freezing temperature. The osmometer is calibrated using traceable standards.

pH

All pH meters are calibrated daily with standard solutions.

Bovine Spongiform Encephalopathy (BSE) Testing

According to the European Regulation EC n° 999/2001, animals are tested for BSE before the corresponding blood is allowed to be processed. The EU is pioneer in BSE testing and individual identification of animals through ear tagging, which ensures the best possible traceability and the lowest BSE risk and makes the EU origin the first choice of researchers in Japan and other selective markets.

Test	Prionics	Bio-Rad
Method	Western Blot	ELISA

Chemical and Enzyme Profile

Test	Method
Sodium	Indirect Potentiometry
Potassium	Indirect Potentiometry
Chloride	Indirect Potentiometry
Calcium	Arsénazo Colorimetry
Phosphorus	Phosphomolybdate Colorimetry
Alkaline Phosphatase	Colorimetric Kinetic at 37°C
LDH	UV Kinetic at 37°C
SGOT	UV Kinetic at 37°C
SGPT	UV Kinetic at 37°C
Gamma Globulin	Colorimetric Kinetic at 37°C
Cholesterol	Cholesterase Trinder Colorimetry
Bilirubin	DPD / caffeine colorimetry
Glucose	Hexokinase UV
Urea	Urease UV
Creatinine	Colorimetric Kinetic (Jaffé)
Triglycerides	Glycerokinase Trinder Colorimetry
Iron	TPTZ Colorimetry

Storage

All Biowest products have labels indicating storage conditions, batch number, and expiry date.

Optimal product performance is guaranteed, when the product is stored properly. Animal Sera and Plasma are stored at -20°C.

Expiration Date

The shelf life for animal Serum is 60 months, and for animal plasma 48 months.

Intended Use

These products are intended for research applications. It is the end user's responsibility to qualify these products for their specific application.

These products are not for diagnostic use. The safety and efficacy of these products in diagnostic or other clinical uses have not been established.

HIGHEST QUALITY FETAL BOVINE SERUM - FBS

FBS BIOPHARM

Meeting the highest quality standards for Biopharmaceutical production and vaccine production, all selected batches of FBS Biopharm come from EDQM certified countries.

To ensure the highest safety for all applications, each batch is gamma irradiated at a guaranteed dose of ≥ 30 kGy (following EMEA/CVMP/743/00-Rev.2 requirements).

All our sera are tested for BVD, IBR and PI3*. FBS Biopharm is also tested for additional viruses, according to EMEA standards : Bluetongue (BTV), Bovine adenovirus (BAV), Bovine parvovirus (BPV), Bovine respiratory syncytial virus (BRSV), Rabies virus (RABV), Reovirus 3 (REO-3), Bovine Leukaemia virus (BLV), Vesicular Stomatitis Virus strains Indiana and New Jersey (VS).

To reach the Biopharm standard, each batch's endotoxin level is < 10 EU/ml

FBS Biopharm

Cat N° :	S181A-100 S181A-500	Unit/Size :	100 ml 500 ml		 -20°C	 60m
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FBS PREMIUM

By using FBS Premium, our customers save time in their daily work: they avoid time consuming batch testing. FBS Premium is a collection of high quality batches, selected on excellent and defined values for essential data:

- Endotoxin level < 5 EU/ml
- Hemoglobin level < 25 mg/100 ml
- Growth promotion $> 80\%$ guaranteed **

By respecting those criteria, we ensure you a low batch-to-batch variation.

Avoid losing time in batch testing, use FBS Premium.

FBS South America, Premium

Cat N° :	S181B-100 S181B-500	Unit/Size :	100 ml 500 ml		 -20°C	 60m
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* see page 9

** on 4 Cell lines : SP2/O-Ag14, HELA, L929 and MRC-5

FBS ULTRA LOW

FBS Ultra has a guaranteed endotoxin level of < 0.1 EU/mL and is appropriate to be used for most sensitive cell cultures or other applications that could be disturbed by high endotoxin levels. It has the same high quality standards like our other sera and is triple 0.1µm Filtered and tested for Virus & Mycoplasma.

FBS South America, Ultra-low Endotoxin

Cat N° :	S1860-100 S1860-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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- Other packaging available on request.

FETAL BOVINE SERUM - FBS




FBS South America

Cat N° :	S1810-100 S1810-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS France

Cat N° :	S1820-100 S1820-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS Central America, USDA approved

Cat N° :	S1600-100 S1600-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS Mexico, USDA approved

Cat N° :	S1650-100 S1650-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS Chile, USDA approved

Cat N° :	S1560-100 S1560-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS Uruguay

Cat N° :	S1580-100 S1580-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS Dominican Republic

Cat N° :	S1610-100 S1610-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS Ireland

Cat N° :	S1780-100 S1780-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS USA

Cat N° :	S1520-100 S1520-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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FBS Australia, USDA approved

Cat N° :	S1700-100 S1700-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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SPECIALITY FETAL BOVINE SERUM

Heat Inactivation (56°C-30 mn)

This treatment destroys 'complement' and thus avoids interference with some experimentation, in particular immunology tests. It also inactivates viruses and destroys some bacterial contaminants such as the mycoplasma.

FBS South America, Heat inactivated


Cat N° :	S181H-100 S181H-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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- *To order this treatment for any other serum using code H*
please replace the last number of its Cat N° by the letter H

Gamma Irradiation

Gamma irradiated serum minimizes the risk associated with the use of animal products and offers protection against low levels of microbial contaminants. The treatment inactivates viruses of potential concern, such as foot and mouth disease, vesicular stomatitis, rinderpest, peste des petits ruminants, Rift valley fever, bluetongue... while maintaining growth promotion potential. The serum is gamma irradiated on a regular basis at 25 kGy and other doses are available upon request.

FBS South America, Gamma Irradiated

Cat N° :	S181G-100 S181G-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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- *To order this treatment for any other serum using code G*
Please replace the last number of its Cat N° by the letter G

Charcoal stripping :

Biowest offers Charcoal / Dextran stripped Fetal Bovine serum for researchers requiring low levels of hormones. Charcoal / Dextran stripping reduces the concentration of steroid hormones in Serum such as estradiol, progesterone, cortisol, testosterone, T3 and T4. This Serum is useful where the endogenous molecules may interfere with experimental research. This serum may show some reduced growth promotion ability for cells requiring the presence of certain hormones (Biblio: Northbio).

FBS South America, Charcoal stripped



Cat N° :	S181F-100 S181F-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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- *To order this treatment for any other serum using code F*
please replace the last number of its Cat N° by the letter F

Dialysation :

The dialysis reduces the concentration of free low molecular weight components such as nucleotides, amino acids, hormones and ions. We use a dynamic filtration method to produce our dialysed serum. The sera are dialysed using a 10 000 molecular weight cut-off membrane.

FBS South America, Dialyzed

Cat N° :	S181D-100 S181D-500	Unit/Size :	100 ml 500 ml		 -20°C	 60m
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- **To order this treatment for any other serum using code D**
please replace the last number of its Cat N° by the letter D

Lipid depletion :

Biowest uses the fumed silica precipitation method for removing lipids. The fumed silica powder is added to the serum. It's well mixed together, after which the solution is centrifuged. The supernatant contains the serum and the lipids are with the silica in the pellet.

FBS South America, Lipid Depleted


Cat N° :	S181L-100 S181L-500	Unit/Size :	100 ml 500 ml		 -20°C	 60m
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- **To order this treatment for any other serum using code L**
please replace the last number of its Cat N° by the letter L

Iron supplementation :

A 1% Ferric citrate sterile solution is added to the serum at 0,246% (v/v). Then the serum is well mixed. Transferrin is normally 20 to 40 % bound to iron.

FBS South America, Iron Supplemented

Cat N° :	S181R-100 S181R-500	Unit/Size :	100 ml 500 ml		 -20°C	 60m
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- **To order this treatment for any other serum using code R**
please replace the last number of its Cat N° by the letter R

Tetracycline

The serum is tested for the presence of Chlortetracycline, Oxytetracycline and Tetracycline by a liquid chromatography electrospray ionisation tandem mass spectrometry method. The detection limit is < 0.05 mg/l

FBS South America, Tetracycline Free


Cat N° :	S181T-100 S181T-500	Unit/Size :	100 ml 500 ml		 -20°C	 60m
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- **To order this treatment for any other serum using code T**
please replace the last number of its Cat N° by the letter T

Embryonic Stem Cells

The serum is tested to confirm a high growth factor content. The cell growth is studied during two passages with mouse embryonic stem cell E14 cell line. The validation criteria are the cell growth and the perfect morphology of the cells.

FBS South America, Embryonic Stem Cells tested

Cat N° :	S181S-100 S181S-500	Unit/Size :	100 ml 500 ml		 -20°C	 60m
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- **To order this treatment for any other serum using code S**
please replace the last number of its Cat N° by the letter S

INSTANT FETAL BOVINE SERUM

Instant FBS is a powdered, soluble Fetal Bovine Serum offering many unique benefits:



Easy to use:

- Dilution in cell culture water or directly in cell culture Media;
- 3 g of instant FBS is equivalent to 50 ml of liquid FBS;
- 30 g pre-packed in tubes for 500 ml Media (10% FBS).

Quality:

- Same quality as liquid FBS;
- No more aliquoting and refreezing of FBS;
- Minimized risk of contamination.

Environmental:

- No need of dry ice, reducing cost and CO₂ pollution;
- No storage in energy consuming freezers in the lab;
- Less weight and volume transported ; no freezer truck, for cost reduced and eco-friendly shipping.

Instant Sterile FBS South America

Cat N° :	S381G-N0.05L S381G-N0.5L	Unit/Size :	3 g 30 g			
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Instant Sterile FBS France

Cat N° :	S382G-N0.05L S382G-N0.5L	Unit/Size :	3 g 30 g			
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FREE ADD

FreeAdd is a fully defined additive for serum free cell cultures. It provides all necessary nutritional support for cell growth, development and expression. Completely free of components from animals and/or humans, FreeAdd has a very low protein level.

Due to its chemically defined composition and the GMP production standards followed in its production, there is a high consistency from batch to batch that makes batch testing's and batch storing needless. It is delivered as 5x concentrated liquid solution.

FreeAdd will allow better planning of your manufacturing and R&D processes, as availability and pricing are consistent, compared to other animal derived/containing products.

The product lowers significantly your downstream processing costs and eliminates risk of virus or BSE/TSE contaminations.

The use of FreeAdd is appropriate for a broad range of cell types, both anchorage-dependent and suspension cells; like VERO, BHK21, CHO, Hybridoma, HEK293, MDBK, Keratinocytes, but also primary cultures and many others. In order to change from serum containing cultures to FreeAdd, adaption may be necessary. You can find protocols on www.biowest.net

FreeAdd 5X

Cat N° :	S6000-020 S6000-100	Unit/Size :	20 ml 100 ml			
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BOVINE SERUM ALBUMIN - BSA

Bovine serum albumin (BSA) is commonly used in cell culture protocols, particularly where protein supplementation is necessary and the other components of serum are unwanted. In cell culture, its main role is as a carrier of small molecules. Because of its negative charge, BSA binds water, salts, fatty acids, vitamins and hormones, then carries these bound components between tissues and cells. The binding capacity also makes BSA an effective scavenger to remove toxic substances, including pyrogens, from the medium.



Albumins are readily soluble in water and can only be precipitated by high concentrations of neutral salts such as ammonium sulfate. The solution stability of BSA is very good (especially if the solutions are stored as frozen aliquots). Albumins are frequently used as stabilizers for other solubilized proteins (e.g., labile enzymes). However, albumin is readily coagulated by heat. When heated to 50°C or above, albumin quite rapidly forms hydrophobic aggregates which do not revert to monomers upon cooling. At somewhat lower temperatures, aggregation is also expected to occur, but at relatively slower rates.

Albumin is used to solubilize lipids, and is also used as a blocking agent in Western blots or ELISA applications.

Bovine Serum Albumin Lyophilised pH ~7

Cat N° :	P6154-100GR P6154-500GR P6154-KG	Unit/Size :	100 g 500 g 1 Kg			
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Bovine Serum Albumin Protease Free

Cat N° :	P6155-100GR P6155-500GR P6155-KG	Unit/Size :	100 g 500 g 1 Kg			
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Bovine Serum Albumin Fatty Acids Free

Cat N° :	P6156-100GR P6156-500GR P6156-KG	Unit/Size :	100 g 500 g 1 Kg			
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Bovine Serum Albumin 30 % liquid

Cat N° :	A0296-1000	Unit/Size :	1000 ml			
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- Other species available on request
- BSA charcoal stripped available on request

ANIMAL SERUM

> All Animal sera can be treated, please inquire about the possibilities

- Other species available on request.
- Other packaging available on request.

Bovine Serum (France Origin)

Cat N° :	S0250-100 S0250-500	Unit/Size :	100 ml 500 ml		 -20°C	 60 m
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

Calf Serum

Cat N° :	S0400-500	Unit/Size :	500 ml		 -20°C	 60 m
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New Born Calf Serum

Cat N° :	S0750-500	Unit/Size :	500 ml		 -20°C	 60 m
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
Horse Serum

Cat N° :	S0910-500	Unit/Size :	500 ml		 -20°C	 60 m
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
Donor Horse Serum

Cat N° :	S0900-500	Unit/Size :	500 ml		 -20°C	 60 m
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Donor Foal Serum

Cat N° :	S0800-500	Unit/Size :	500 ml		 -20°C	 60 m
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Donkey Serum

Cat N° :	S2170-500	Unit/Size :	500 ml		 -20°C	 60 m
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Goat Serum

Cat N° :	S2000-500	Unit/Size :	500 ml		 -20°C	 60 m
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Lamb Serum

Cat N° :	S2300-500	Unit/Size :	500 ml		 -20°C	 60 m
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Sheep Serum

Cat N° :	S2350-500	Unit/Size :	500 ml		 -20°C	 60 m
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Pig Serum

Cat N° :	S2400-500	Unit/Size :	500 ml		 -20°C	 60 m
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Chicken Serum

Cat N° :	S0500-500	Unit/Size :	500 ml		 -20°C	 60 m
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Rabbit Serum

Cat N° :	S2500-500	Unit/Size :	500 ml		 -20°C	 60 m
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Rat Serum

Cat N° :	S2150-050 S2150-100 S2150-500	Unit/Size :	50 ml 100 ml 500 ml		 -20°C	 60 m
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Mouse Serum

Cat N° :	S2160-050 S2160-100 S2160-500	Unit/Size :	50 ml 100 ml 500 ml		 -20°C	 60 m
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Guinea Pig Serum

Cat N° :	S2450-010 S2450-100	Unit/Size :	10 ml 100 ml		 -20°C	 60m
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ANIMAL PLASMA


Bovine Plasma w/ Sodium Citrate

Cat N° :	S0260-500	Unit/Size :	500 ml		 -20°C	 48m
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Rabbit Plasma w/ EDTA

Cat N° :	S2600-500	Unit/Size :	500 ml		 -20°C	 48m
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Rat Plasma w/ Lithium Heparin

Cat N° :	S2140-100	Unit/Size :	100 ml		 -20°C	 48m
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Mouse Plasma w/ Lithium Heparin

Cat N° :	S2162-100	Unit/Size :	100 ml		 -20°C	 48m
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- Other species available on request.
- Other packaging available on request.

HUMAN SERUM, PLASMA & ALBUMIN

The **human serum** «off-the-clot» is processed from human blood that has had coagulation induced. It is collected from volunteer donors. Each batch is rigorously controlled and screened for Hepatitis B (HBS), Hepatitis C (HCV) and HIV Type 1 and 2 (HIV1/2).

Our **human sera** are mainly sourced in Europe and Canada.

- *Important : Products of human origin should be considered potentially infectious and handled accordingly.*

Human Serum AB male HIV tested

Cat N° :	S4190-100	Unit/Size :	100 ml		 -20°C	 60m
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Human Serum HIV tested

Cat N° :	S4200-100	Unit/Size :	100 ml		 -20°C	 60m
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Human Plasma pooled

Cat N° :	S4180-100 S4180-500	Unit/Size :	100 ml 500 ml		 -20°C	 48m
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Human Serum Albumin

Cat N° :	P6140-100GR P6140-500GR P6140-KG	Unit/Size :	100 g 500 g 1 kg		 +8°C +2°C	 48m
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> Human Serum is available with treatments (see pages 14-15). Please contact us so we can make your custom made product on request

CELL CULTURE MEDIA

LEGEND

State:	 Liquid	 Powder	 Frozen
Storage and shipping conditions:	 Room Temperature	 +8°C	 -20°C
Shelf life, in months:	 24 m		

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Serum

Cell Culture Media

Salt Solutions

Antibiotics

Cell Culture Reagents
& other products

About Cell Culture Media

Standard Media

Biowest media formulations are manufactured following original publications, standards set by the Tissue Culture Association and accepted formulations. These formulations may vary from these standards by substituting hydrated, chlorinated and/or the salt forms of certain compounds where such substitutions contribute to improved performance of the product.

Custom Made Formulations

The preparing and production of your personalised cell culture media compositions is another of our services. Give us the list of components needed and the corresponding quantities and we will produce this to your requirements. There may be a short delay for this service.

Quality Assurance

All of the chemicals, raw materials and equipment that we use are of the highest quality. Inorganic chemicals are analytical, ACS, USP, EP, FCC grade or otherwise the finest grade available. All other components are evaluated by standards established by Biowest

All new batches of chemicals are introduced in the process after stringent QC. The water used for media preparation is of the highest quality. It is of WFI quality, produced in several steps including centrifugal distillation and tested for endotoxins. The resistivity is measured in line and all values are monitored and stored by the QC department. The water is always freshly processed and cooled down to 20°C before adding the powder.

Equipment and conditions

All equipment used for the manufacturing of powdered and liquid media are made of chemical inert materials which will not contaminate the final product. For nearly 30 years, Biowest has supplied the cell culture industry, following strict environmental conditions regarding cleanliness and moisture. Humidity and temperature are monitored constantly to guarantee that all chemicals are ground into fine powder. The liquid media sterilisation is carried out by going through a 0,1 µm pore size sterile filter.

Batch size

Batch sizes for powdered media range from 1 to 10.000 liters, for liquid media from 1 to 1500 liters.



End Product Testing

The powder Media are tested physically for osmotic effects and pH. Osmolality is determined by means of the freezing point method. The chemical composition and the homogeneity of the mixture are controlled by analysis of glucose or sodium in the sample. Endotoxin testing is performed using the Limulus Amoebocyte test. The chromokinetic test is used to verify the quality of the medium.

The liquid Media are tested for the sterility, pH and osmolality. The biological performance test is done on different cell lines, for each type of media. The endotoxin level is also tested by a chromokinetic test.

Storage and Stability

Powdered media must be stored at 2-8°C in their original containers and in dry, dark conditions. Heat, light and humidity can greatly affect the performance of powdered media therefore we recommend that powder be stored correctly if not used entirely. All liquid media must be stored at 2-8°C in the dark.

Advantages and use of powdered tissue culture media

While liquid media are convenient to use, there are several drawbacks which make powdered media also attractive.

1. Long term studies can be carried out using a single batch of powdered medium
2. Storage time higher
3. Reduces the unit costs by 3-10 times
4. Storage space is greatly reduced

The advantages of liquid media

1. Lower labour costs
2. Quality control and functional testing
3. Stock organisation is easier to control

The protocols of all steps during processing and all final test results, reassure the customer that each batch meets the criteria and has been manufactured to the product specifications. The retained samples also allow the testing in long term shelf-life studies, and also control testing in response to customer inquiries.



BASAL MEDIUM EAGLE - BME

Basal Medium Eagle is principally used for diploid or primary cell cultures. It is the simplest of the basal media with all essential components for growth. BME ideally supports cell lines such as HeLa, L-cells and primary mammalian fibroblasts.

BME w/ Earle's Salts w/o L-Glutamine

Cat N° :	L0042-500	Unit/Size :	500 ml		 +8°C +2	 24 m
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BME w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0030-N1L P0030-N10L	Unit/Size :	For 1L For 10L		 +8°C +2	 48 m
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> *Composition available on our website www.biowest.net*

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

CMRL 1066

CMRL was originally formulated for promoting « L » Earle cells growth.

CMRL 1066 w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0058-N1L P0058-N10L	Unit/Size :	For 1L For 10L		 +8°C +2	 24 m
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> *Composition available on our website www.biowest.net*

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

DULBECCO'S MODIFIED EAGLE MEDIUM - DMEM

Dulbecco's Modified Eagle Medium is for supporting and maintaining a broad spectrum of mammalian cell types.

DMEM HIGH GLUCOSE


DMEM High Glucose w/o L-Glutamine
w/o Sodium Pyruvate

Cat N° :	L0101-500	Unit/Size :	500 ml		 +8 +2 °C	 24m
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DMEM High Glucose w/ L-Glutamine
w/o Sodium Pyruvate

Cat N° :	L0102-500	Unit/Size :	500 ml		 +8 +2 °C	 12m
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DMEM High Glucose w/ stable Glutamine
w/ Sodium Pyruvate

Cat N° :	L0103-500	Unit/Size :	500 ml		 +8 +2 °C	 24m
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
DMEM High Glucose w/ L-Glutamine
w/ Sodium Pyruvate

Cat N° :	L0104-500	Unit/Size :	500 ml		 +8 +2 °C	 12m
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DMEM High Glucose w/o L-Glutamine
w/ Sodium Pyruvate

Cat N° :	L0106-500	Unit/Size :	500 ml		 +8 +2 °C	 24m
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DMEM High Glucose w/o L-Glutamine
w/ 25mM Hepes w/o Sodium Pyruvate

Cat N° :	L0100-500	Unit/Size :	500 ml		 +8 +2 °C	 24m
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DMEM High Glucose w/ stable Glutamine
w/ 25mM Hepes w/o Sodium Pyruvate

Cat N° :	L0107-500	Unit/Size :	500 ml		 +8 +2 °C	 24m
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DMEM High Glucose w/ L-Glutamine
w/o Sodium Bicarbonate w/ Sodium Pyruvate

Cat N° :	P0102-N1L P0102-N10L	Unit/Size :	For 1L For 10L		 +8 +2 °C	 36m
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DMEM High Glucose w/ L-Glutamine
w/o Sodium Bicarbonate w/o Sodium Pyruvate

Cat N° :	P0103-N1L P0103-N10L	Unit/Size :	For 1L For 10L		 +8 +2 °C	 36m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request
- For your special formulation, please contact us so we can make your custom made Media on request

DMEM LOW GLUCOSE



DMEM Low Glucose w/ L-Glutamine
w/ Sodium Pyruvate

Cat N° : L0060-500	Unit/Size : 500 ml			
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DMEM Low Glucose w/o L-Glutamine
w/ Sodium Pyruvate

Cat N° : L0064-500	Unit/Size : 500 ml			
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DMEM Low Glucose w/ L-Glutamine
w/ Sodium Pyruvate w/ 25 mM HEPES

Cat N° : L0065-500	Unit/Size : 500 ml			
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DMEM Low Glucose w/ Stable Glutamine
w/ Sodium Pyruvate

Cat N° : L0066-500	Unit/Size : 500 ml			
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DMEM Low Glucose w/ L-Glutamine
w/o Sodium Bicarbonate w/ Sodium Pyruvate

Cat N° : P0061-N1L	Unit/Size : For 1L			
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> **Composition available on our website www.biowest.net**

- Other packagings available on request
- For your special formulation, please contact us so we can make your custom made Media on request

DMEM - HAM'S F12


Studies to determine the nutritional requirements of many cells have been in progress since Eagle's first reports. The major essential nutrients were identified and work became focused on the media requirements of individual cell types. Many media designed for these purposes are now available.

Among the first of these media, developed initially to study hormonal requirements of cells in culture, was a mixture of DMEM medium and Ham's F12 medium, known as DMEM Ham's F12.


DMEM - F12 w/o L- Glutamine
w/o HEPES

Cat N° : L0090-500	Unit/Size : 500 ml			
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DMEM - F12 w/o L-Glutamine
w/o HEPES w/o Glucose

Cat N° : L0091-500	Unit/Size : 500 ml			
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DMEM - F12 w/ stable Glutamine
w/ 15 mM HEPES

Cat N° : L0092-500	Unit/Size : 500 ml			
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DMEM - F12 w/ L-Glutamine w/ 15 mM Hepes

Cat N° :	L0093-500	Unit/Size :	500 ml		 +8 -2 °C	 12m
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

DMEM - F12 w/o L-Glutamine w/ 15 mM Hepes

Cat N° :	L0094-500	Unit/Size :	500 ml		 +8 -2 °C	 24m
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DMEM - F12 w/ L-Glutamine w/ 25 mM Hepes

Cat N° :	L0095-500	Unit/Size :	500 ml		 +8 -2 °C	 12m
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DMEM - F12 w/o L-Glutamine w/ 25 mM Hepes

Cat N° :	L0096-500	Unit/Size :	500 ml		 +8 -2 °C	 24m
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DMEM - F12 w/ L-Glutamine w/o Sodium Bicarbonate w/ 15 mM Hepes

Cat N° :	P0095-N1L P0095-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 36m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request
- For your special formulation, please contact us so we can make your custom made Media on request

GLASGOW MEM BHK 21

GMEM was originally formulated for growing BHK21 cells. It is intended for use with adherent cell lines.

GMEM BHK 21 w/ L-Glutamine w/o Tryptose Phosphate Broth

Cat N° :	L0221-500	Unit/Size :	500 ml		 +8 -2 °C	 12m
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GMEM BHK 21 w/o L-Glutamine w/o Tryptose Phosphate Broth

Cat N° :	L0222-500	Unit/Size :	500 ml		 +8 -2 °C	 24m
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GMEM BHK21 w/ L-Glutamine w/o Sodium Bicarbonate w/o Tryptose Phosphate Broth

Cat N° :	P0120-N1L P0120-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 36m
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> **Composition available on our website www.biowest.net**

- Glasgow MEM media are only available with a minimum order quantity of 20 bottles x 500 ml.
- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

HAM'S F10 / F-10 NUTRIENT MEDIUM

To support the growth of Chinese Hamster Ovary Cells under serum free conditions and other mammalian cell types with serum supplementation. It is a popular medium for growth of fastidious cell lines

Ham's F10 w/ L-Glutamine

Cat N° :	L0140-500	Unit/Size :	500 ml		 +8/-2 °C	 12m
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Ham's F10 w/o L-Glutamine

Cat N° :	L0145-500	Unit/Size :	500 ml		 +8/-2 °C	 24m
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Ham's F10 w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0146-N1L P0146-N10L	Unit/Size :	For 1L For 10L		 +8/-2 °C	 36m
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
> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

HAM'S F12 / F-12 NUTRIENT MEDIUM

Ham's F12 was originally developed for the serum-free clonal growth of Chinese Hamster Ovary (CHO) cells, lung cells and mouse L-cells. It is frequently used with dialysed serum, hormones, selenium and other supplements for serum-free cultures. It is the medium of choice for supporting the growth of cells of rodent origin, particularly rabbit and rat and has proved to be an excellent cloning medium for the culture of myeloma and hybrid cells.

Ham's F12 w/ L-Glutamine

Cat N° :	L0135-500	Unit/Size :	500 ml		 +8/-2 °C	 12m
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Ham's F12 w/o L-Glutamine

Cat N° :	L0136-500	Unit/Size :	500 ml		 +8/-2 °C	 24m
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Ham's F12 w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0134-N10L P0134-N1L	Unit/Size :	For 10 L For 1 L		 +8/-2 °C	 36m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

HAM'S F14 / F-14 NUTRIENT MEDIUM

Ham's F14 medium was developed from the Ham's F12, which was originally developed for the serum-free clonal growth of Chinese Hamster Ovary (CHO) cells, lung cells and mouse L-cells.

Ham's F14 contains a double concentration of amino acids compared to the Ham's F12. This product is also supplemented with Calcium chloride and Ascorbic Acid.

Ham's F14 w/ 6g/L glucose w/ 1mg/L ATP

Cat N° :	L0138-500	Unit/Size :	500 ml			
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

ISCOVE'S MODIFIED DULBECCO'S MEDIUM - IMDM

In 1976, Guilbert and Iscove demonstrated that precursor cells of erythrocytes and macrophages could be cultured in a reduced-serum medium supplemented with albumin, transferrin, lecithin, and selenium.

Iscove's medium is a modification of Dulbecco's Modified Eagle's Medium (DMEM) containing selenium, additional amino acids and vitamins, sodium pyruvate, HEPES buffer, and potassium nitrate instead of ferric nitrate.

Further studies demonstrated that Iscove's Medium would support murine B lymphocytes, hemopoietic tissue from bone marrow, B cells stimulated with lipopolysaccharide, T lymphocytes, and a variety of hybrid cells.

IMDM w/ L- Glutamine w/ 25mM Hepes

Cat N° :	L0190-500	Unit/Size :	500 ml			
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IMDM w/stable Glutamine w/ 25mM Hepes

Cat N° :	L0191-500	Unit/Size :	500 ml			
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IMDM w/o L-Glutamine w/o Hepes

Cat N° :	L0192-500	Unit/Size :	500 ml			
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IMDM w/ L-Glutamine w/o Sodium Bicarbonate w/ 25 mM Hepes

Cat N° :	P0191-N1L P0191-N10L	Unit/Size :	For 1L For 10L			
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

LEIBOVITZ L-15 MEDIUM

The Leibovitz L-15 media were formulated to promote the cell growth in medium not balanced in CO₂. The formulations were developed with the sodium bicarbonate buffer. The Leibovitz L-15 media are buffered by a complement of salts, free base amino acids and galactose, so they can be used under conditions of free gaseous exchange with the atmosphere. When properly supplemented, L-15 Medium supports established cell lines, such as HEP-2 and LLC-MK2, as well as primary explants of embryonic and adult human tissue. Many viruses also have been successfully cultivated in this medium.

Leibovitz L15 Medium w/o L-Glutamine

Cat N° :	L0300-500	Unit/Size :	500 ml		 +8°C +2°C	 24m
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Leibovitz L 15 Medium w/ L-Glutamine

Cat N° :	P0350-N1L P0350-N10L	Unit/Size :	For 1L For 10L		 +8°C +2°C	 36m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

MC COY'S 5A MEDIUM

Mc Coy's media were originally formulated for growth and support of lymphocytes. This final modification produced a medium identical to RPMI 1629. McCoy's 5A media support the indefinite proliferation of Walker 256 carcinoma cells. In addition, it is excellent for the propagation of leukocytes, biopsy tissues, a broad range of human and rat normal or transformed cell types, the most current primary and continuous cell lines.

McCoy's 5A w/ L-Glutamine

Cat N° :	L0210-500	Unit/Size :	500 ml		 +8°C +2°C	 12m
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McCoy's 5A w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0390-N1L P0390-N10L	Unit/Size :	For 1L For 10L		 +8°C +2°C	 36m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

MEDIUM 199

The longterm cultivation of cells requires additional serum. When properly supplemented, Medium 199 has broad species applicability, particularly for the cultivation of non-transformed cells. It is widely used in virology, vaccine production and in vitro cultivation of primary explants of mouse pancreatic epithelial and rat lens tissues.

Medium 199 w/ Hanks' Salts w/ L-Glutamine

Cat N° :	L0330-500	Unit/Size :	500 ml		 +8/-2 °C	 18 m
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Medium 199 w/ Earle's Mod. Salts w/ L-Glutamine w/ 1.25g/l Sodium Bicarbonate

Cat N° :	L0355-500	Unit/Size :	500 ml		 +8/-2 °C	 18 m
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Medium 199 w/ Earle's Salts w/o L-Glutamine

Cat N° :	L0356-500	Unit/Size :	500 ml		 +8/-2 °C	 24 m
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Medium 199 w/ Earle's Salts w/ stable Glutamine w/ 25 mM Hepes

Cat N° :	L0361-500	Unit/Size :	500 ml		 +8/-2 °C	 24 m
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Medium 199 modified w/ Hanks' Salts w/o L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0410-N1L P0410-N10L	Unit/Size :	For 1L For 10L		 +8/-2 °C	 36 m
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Medium 199 w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0420-N1L P0420-N10L	Unit/Size :	For 1L For 10L		 +8/-2 °C	 36 m
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Medium 199 w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate w/ 25 mM Hepes

Cat N° :	P0425-N1L P0425-N10L	Unit/Size :	For 1L For 10L		 +8/-2 °C	 36 m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

MINIMUM ESSENTIAL MEDIUM - MEM

Minimum Essential Medium (MEM) with Earle's Balanced Salts is a modification of Eagle's earlier medium Basal Medium Eagle (BME), containing higher concentrations of the essential nutrients. These media have demonstrated the ability to support a variety of normal and transformed cells in culture and contain Earle's Balanced Salts, which make them suitable for use in atmospheres charged with CO₂ gas.

MEM w/ EARLE'S SALTS

MEM w/ Earle's Salts w/ L-Glutamine

Cat N° :	L0415-500	Unit/Size :	500 ml			
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MEM w/ Earle's Salts w/ stable Glutamine

Cat N° :	L0416-500	Unit/Size :	500 ml			
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MEM w/ Earle's Salts w/o L-Glutamine w/ NEAA

Cat N° :	L0430-500	Unit/Size :	500 ml			
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MEM w/ Earle's Salts w/o L-Glutamine

Cat N° :	L0440-500	Unit/Size :	500 ml			
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MEM w/ Earle's Salts w/ L-Glutamine w/ 25 mM Hepes

Cat N° :	L0444-500	Unit/Size :	500 ml			
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MEM w/ Earle's Salts w/o L-Glutamine w/ 25 mM Hepes

Cat N° :	L0445-500	Unit/Size :	500 ml			
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MEM w/ Earle's Salts w/ L-Glutamine w/ NEAA w/o Sodium Bicarbonate

Cat N° :	P0450-N1L P0450-N10L	Unit/Size :	For 1L For 10L			
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MEM w/ Earle's Salts w/ L-Glutamine w/o NEAA w/o Sodium Bicarbonate

Cat N° :	P0451-N1L P0451-N10L	Unit/Size :	For 1L For 10L			
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> *Composition available on our website www.biowest.net*

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

MEM W/ HANKS' SALTS


MEM w/ Hanks' Salts Solution w/o L-Glutamine

Cat N° :	L0465-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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MEM w/ Hanks' Salts w/o L-Glutamine w/ 25 mM Hepes

Cat N° :	L0470-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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MEM w/ Hanks' Salts w/ L-Glutamine w/ NEAA w/o Sodium Bicarbonate

Cat N° :	P0515-N1L P0515-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 36 m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

MEM ALPHA MODIFICATION

MEM Alpha w/ L-Glutamine w/o Ribonucleosides w/o Deoxyribonucleosides

Cat N° :	L0475-500	Unit/Size :	500 ml		 +8 -2 °C	 12 m
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MEM Alpha w/o L-Glutamine w/o Ribonucleosides w/o Deoxyribonucleosides

Cat N° :	L0476-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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MEM Alpha Modification w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0440-N1L P0440-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 36 m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

RPMI 1640 MEDIUM

RPMI are general purpose enriched media with extensive applications for a broad spectrum of mammalian and hybridoma cells, including human myeloma, mouse hybridoma, human leukocytes, and B and T lymphocytes. It was originally formulated for suspension cultures and monolayer culture of human leukemia cells.

RPMI 1640 w/ L-Glutamine

Cat N° :	L0500-100 L0500-500	Unit/Size :	100 ml 500 ml		 +8 -2 °C	 12 m
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RPMI 1640 w/o L-Glutamine

Cat N° :	L0501-100 L0501-500	Unit/Size :	100 ml 500 ml		 +8 -2 °C	 24 m
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RPMI 1640 w/ stable Glutamine

Cat N° :	L0498-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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RPMI 1640 w/ L-Glutamine w/ 25 mM Hepes

Cat N° :	L0495-500	Unit/Size :	500 ml		 +8 -2 °C	 12 m
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RPMI 1640 w/ stable Glutamine w/ 25 mM Hepes

Cat N° :	L0496-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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RPMI 1640 w/o L-Glutamine w/ 25 mM Hepes

Cat N° :	L0490-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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RPMI 1640 Dutch Modification w/o L-Glutamine w/ 1g/l Na Bicarbonate w/20mM Hepes

Cat N° :	L0492-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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RPMI 1640 w/o L-Glutamine w/o Folic Acid

Cat N° :	L0503-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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RPMI 1640 w/o L-Glutamine w/o Phenol Red

Cat N° :	L0505-500	Unit/Size :	500 ml		 +8 -2 °C	 24 m
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RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0860-N1L P0860-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 24 m
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RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate

Cat N° :	P0870-N1L P0870-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 24 m
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RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red

Cat N° :	P0880-N1L P0880-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 24 m
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RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red

Cat N° :	P0871-N1L P0871-N10L	Unit/Size :	For 1L For 10L		 +8 -2 °C	 24 m
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RPMI 1640 w/ L- Glutamine w/o Sodium Bicarbonate w/ 25 mM Hepes w/o Phenol Red

Cat N° :	P0876-N1L P0876-N10L	Unit/Size :	For 1L For 10L			
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RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Glucose

Cat N° :	P0883-N1L P0883-N10L	Unit/Size :	For 1L For 10L			
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

SCHNEIDER'S DROSOPHILA MEDIUM

Schneider's Insect medium was developed to support the growth of excised imaginal disks from the fruitfly, *Drosophila melanogaster*. When supplemented with 5-20% heat-inactivated fetal bovine serum, Schneider's medium has been found to support the rapid growth of both primary and established cultures of cells derived from *Drosophila* spp. and several other dipterans.

Schneider's Drosophila Medium

Cat N° :	L0207-500	Unit/Size :	500 ml			
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

SERUM REDUCED MEDIA - MCDB

These media were formulated as a reduced serum supplemented medium for the cultivation of human microvascular endothelial cells. For other microvascular cells, it is recommended to be used with growth factors, like EGF or hormones like hydrocortisone.

MCDB 105

Cat N° :	L1200-500	Unit/Size :	500 ml			
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MCDB 131

Cat N° :	L1202-500	Unit/Size :	500 ml			
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MCDB 151

Cat N° :	L1203-500	Unit/Size :	500 ml			
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> **Composition available on our website www.biowest.net**

- MCDB media are only available with a minimum order quantity of 20 bottles x 500 ml.
- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made Media on request.

Instructions

How to store your product

Store the dry powdered medium at 2-8°C under dry conditions and liquid medium at 2-8°C in the dark.

Deterioration of the powdered medium may be recognized by any or all of the following:

- color range
- granulation / clumping
- insolubility

Deterioration of the following into liquid media:

- pH change
- precipitate or particulate matter throughout the solution
- cloudy appearance
- color change

The nature of additional supplements may affect storage conditions and shelf life of the medium. Product label bears expiration date.

How to prepare your solution from powder media

Powdered Media are extremely hygroscopic and should be protected from atmospheric moisture. The entire content of each package should be closed immediately after opening. Preparing a concentrated solution of medium is not recommended as precipitates may form.








Supplements can be added prior to filtration or introduced aseptically to sterile medium. The nature of the supplements may effect storage conditions and shelf life of the medium.

- 1. Measure out 90% of initial required volume of water. Water temperature should be 15 – 20 °C.*
- 2. While gently stirring the water, add the powdered medium. Stir until dissolved. Do not heat.*
- 3. Rinse original package with small amount of water to remove all traces of powder. Add to solution in step 2.*
- 4. Supplement the medium according to your needs. For sodium bicarbonate and L-glutamine see pages 52-54*
- 5. While stirring, adjust the pH of the medium to 0,1 – 0,3 pH units below the desired pH since it may rise during filtration. The use of 1N HCl or 1N NaOH is recommended.*
- 6. Add additional water to bring the solution to final volume.*
- 7. Sterilize immediately by filtration using a membrane with a porosity of 0,22 microns or less.*
- 8. Aseptically dispense medium into sterile container.*



SALT SOLUTIONS

LEGEND

State:	 Liquid	 Powder	 Frozen
Storage and shipping conditions:	 Room Temperature	 +8°C	 -20°C
Shelf life, in months:	 24 m		

Chapter Summary

About Salt Solutions & Salts / Buffers	39
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Earle's Balanced Salt Solutions - EBSS	40
Hanks' Balanced Salt Solutions - HBSS	41
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About Salt Solutions & Salts / Buffers

The irrigating buffers and salt solutions are sterile physiological balanced solutions intended for use in the maintenance of mammalian cells where a chemically defined, balanced salt solution provides an environment that will maintain the structural and physiological integrity of cells in vitro. The buffers and solutions are used in the first steps of preparing parts of organs and during the dissociation process or for isolation of cell suspensions. Further applications are the intermediate steps for the cultivation of cells like washing, centrifugation, suspending and counting and also many analytical methods or biochemical treatments. For the most part, these solutions should be used to maintain the cells only for minutes or, at the most, a few hours in suspension. These buffers and solutions are not cell culture media.


They are made up of a Phosphate buffer system, sodium chloride to adjust the osmolarity and in some cases sugar for a short time nutrition and stabilisation of morphology. For applications where Ca^{2+} and Mg^{2+} ions interfere with enzyme activity e.g. Trypsin, use the modified buffers w/o Calcium w/o Magnesium.

DULBECCO'S PHOSPHATE BUFFERED SALINE - DPBS

Dulbecco's Phosphate Buffered Saline w/o Calcium w/o Magnesium

Cat N° :	L0615-100 L0615-500 L0615-1000	Unit/Size :	100 ml 500 ml 1000 ml			 48 m
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Dulbecco's Phosphate Buffered Saline w/o Calcium w/o Magnesium (sterile)

Cat N° :	L0615-C10LS	Unit/Size :	10 L			 48 m
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Dulbecco's Phosphate Buffered Saline w/ Calcium w/ Magnesium

Cat N° :	L0625-500 L0625-1000	Unit/Size :	500 ml 1000 ml			 48 m
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Dulbecco's Phosphate Buffered Saline 10X w/o Calcium w/o Magnesium

Cat N° :	X0515-100 X0515-500	Unit/Size :	100 ml 500 ml			 48 m
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Dulbecco's Phosphate Buffered Saline 10X w/ Calcium w/ Magnesium

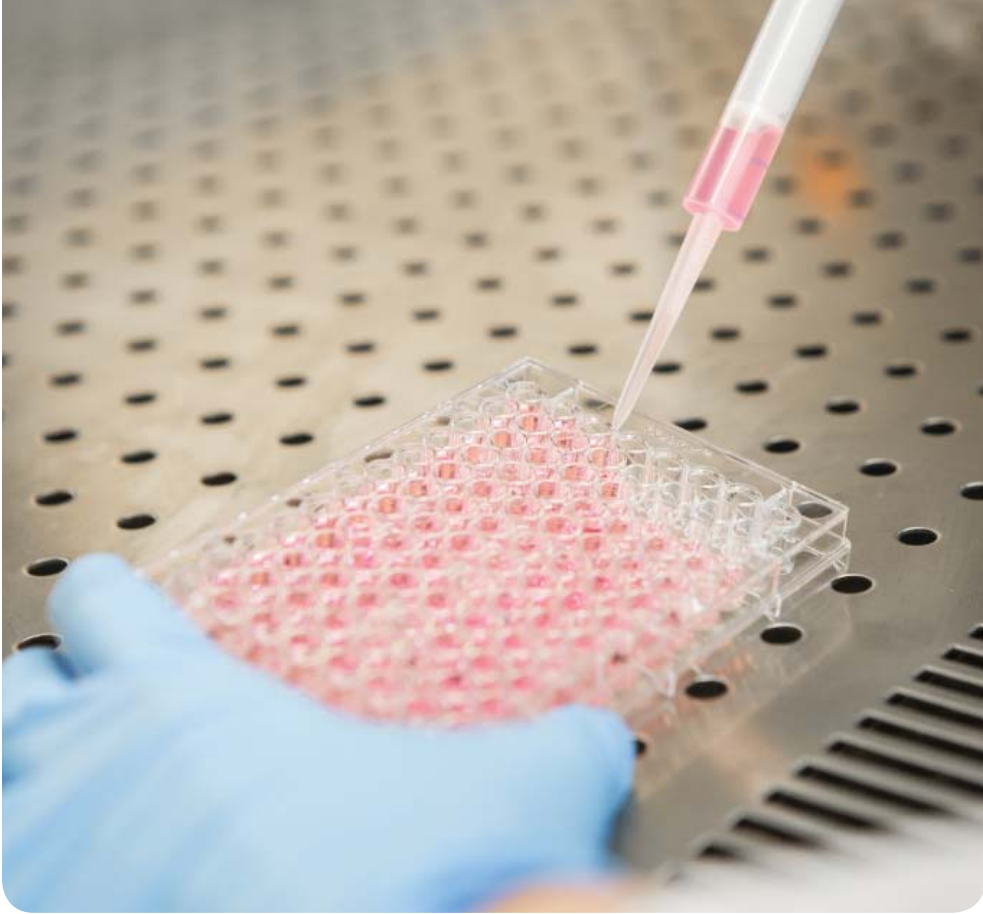
Cat N° :	X0520-500	Unit/Size :	500 ml			 48 m
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Dulbecco's Phosphate Buffered Saline w/o Calcium w/o Magnesium

Cat N° :	P0750-N1L P0750-N10L	Unit/Size :	For 1L For 10L			 48 m
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> *Composition available on our website www.biowest.net*

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made product on request.



EARLE'S BALANCED SALT SOLUTIONS - EBSS

EBSS w/o Calcium w/o Magnesium

Cat N° : L0601-500	Unit/Size : 500 ml		 Room Temp	 48 m
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EBSS w/ Calcium w/ Magnesium

Cat N° : L0602-500	Unit/Size : 500 ml		 Room Temp	 48 m
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EBSS10X w/ Calcium w/ Magnesium w/o Sodium Bicarbonate

Cat N° : X0112-500	Unit/Size : 500 ml		 Room Temp	 48 m
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EBSS 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate

Cat N° : X0113-500	Unit/Size : 500 ml		 Room Temp	 48 m
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> *Composition available on our website www.biowest.net*


- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made product on request.

HANKS' BALANCED SALT SOLUTIONS - HBSS

HBSS w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/o Phenol Red

Cat N° :	L0605-500	Unit/Size :	500 ml			 48 m
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HBSS w/ Calcium w/ Magnesium w/ Sodium Bicarbonate w/ Phenol Red

Cat N° :	L0606-500	Unit/Size :	500 ml			 48 m
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HBSS w/o Calcium w/o Magnesium w/ Sodium Bicarbonate w/o Phenol Red

Cat N° :	L0607-500	Unit/Size :	500 ml			 48 m
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HBSS w/o Calcium w/o Magnesium w/ Sodium Bicarbonate w/ Phenol Red

Cat N° :	L0611-500	Unit/Size :	500 ml			 48 m
----------	-----------	-------------	--------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	------------------------------------------------------------------------------------------

HBSS w/ Calcium w/ Magnesium w/ Sodium Bicarbonate w/o Phenol Red

Cat N° :	L0612-500	Unit/Size :	500 ml			 48 m
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HBSS 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/o Phenol Red

Cat N° :	X0507-500	Unit/Size :	500 ml			 48 m
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HBSS 10X w/ Calcium w/ Magnesium w/o Sodium Bicarbonate w/ Phenol Red

Cat N° :	X0509-500	Unit/Size :	500 ml			 48 m
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HBSS 10X w/o Calcium w/o Magnesium w/ Sodium Bicarbonate w/o Phenol Red

Cat N° :	X0510-500	Unit/Size :	500 ml			 48 m
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HBSS 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/ Phenol Red

Cat N° :	X0513-500	Unit/Size :	500 ml			 48 m
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HBSS w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/o Phenol Red - For 10L

Cat N° :	P0153-N1L P0153-N10L	Unit/Size :	For 1L For 10L			 48 m
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HBSS w/ Calcium w/ Magnesium w/o Sodium Bicarbonate w/ Phenol Red - For 10L

Cat N° :	P0154-N1L P0154-N10L	Unit/Size :	For 1L For 10L			 48 m
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> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made product on request.

Serum

Cell Culture Media

Salt Solutions

Antibiotics

Cell Culture Reagents
& other products

HEPES

HEPES Buffer 1 M

Cat N° :	L0180-100 L0180-500	Unit/Size :	100 ml 500 ml			
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HEPES, cell culture tested

Cat N° :	P5455-100GR P5455-500GR P5455-KG	Unit/Size :	100 g 500 g 1000 g			
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- Other packagings available on request.

OTHER SALT SOLUTIONS & SALTS

Sodium Bicarbonate 7.5 %

Cat N° :	L0680-100	Unit/Size :	100 ml			
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Sodium Bicarbonate, cell culture tested

Cat N° :	P2060-500GR	Unit/Size :	500 g			
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Sodium Chloride Salt Solution 0.85 %

Cat N° :	L0640-500	Unit/Size :	500 ml			
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
Sodium Chloride for dilution 9 g/l

Cat N° :	P2064-N5L	Unit/Size :	For 5L			
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Sodium Chloride

Cat N° :	P2066-KG	Unit/Size :	1000 g			
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Sodium Pyruvate 100 mM

Cat N° :	L0642-100 L0642-500	Unit/Size :	100 ml 500 ml			
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Potassium Chloride 0.075 M

Cat N° :	L0643-100 L0643-500	Unit/Size :	100 ml 500 ml			
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Potassium Chloride

Cat N° :	P2035-500GR	Unit/Size :	500 g			
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Versene

Cat N° :	L0630-100	Unit/Size :	100 ml			
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


- Other Salts available on request.

> **Composition available on our website www.biowest.net**

- Other packagings available on request.
- For your special formulation, please contact us so we can make your custom made 42 on request.

ANTIBIOTICS

LEGEND

State:	 Liquid	 Powder	 Frozen
Storage and shipping conditions:	 Room Temperature	 +8°C	 -20°C
Shelf life, in months:	 24 m		

Antibiotics


The use of antibiotics is a helpful tool in the cell culture field or where fluids have to be conserved and prevented from bacterial contamination.

Most of the antibiotics suppress the growth of micro-organisms by blocking an anabolic pathway.

NANOMYCOPULITINE actively kills the bacteria, including mycoplasma, in all three stages of development without interfering with the eukaryotic metabolism.

ANTIBIOTICS

Amphotericin B

Cat N° :	L0009-050 L0009-100	Unit/Size :	50 ml 100 ml		 -20°C	 24 m
Cat N° :	P4030-250MG	Unit/Size :	250 mg		 +8°C +2°C	 24 m

Antibiotic-Antimycotic 100X

Cat N° :	L0010-020 L0010-100	Unit/Size :	20 ml 100 ml		 -20°C	 24 m
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G-418 (Geneticin) Solution

Cat N° :	L0015-020 L0015-100	Unit/Size :	20 ml 100 ml		 -20°C	 24 m
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G-418 Sulfate

Cat N° :	P0017-1GR P0017-5GR	Unit/Size :	1 g 5 g		 +8°C +2°C	 36 m
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Gentamicin Sulfate

Cat N° :	P4020-1GR P4020-5GR	Unit/Size :	1 g 5 g		 +8°C +2°C	 48 m
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Gentamicin Sulfate 10 mg/ml

Cat N° :	L0011-010 L0011-100	Unit/Size :	10 ml 100 ml		 -20°C	 24 m
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Gentamicin Sulfate 50 mg/ml

Cat N° :	L0012-010 L0012-100	Unit/Size :	10 ml 100 ml		 -20°C	 24 m
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Glutamine-Penicillin-Streptomycin 100X

Cat N° :	L0014-100	Unit/Size :	100 ml		 -20°C	 24 m
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Kanamycin Solution 100X

Cat N° :	L0008-020 L0008-100	Unit/Size :	20 ml 100 ml		 -20°C	 24 m
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Nanomycopulitine Concentrat 20 x

Cat N° :	L-X16-010 L-X16-100	Unit/Size :	10 ml 100 ml		 -20°C	 24 m
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Penicillin G Sodium Salt - 1 Million Units

Cat N° :	P0018-1MU	Unit/Size :	1 Million units		 +8 +2°C	 36 m
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Penicillin-Streptomycin

Cat N° :	L0018-020 L0018-100	Unit/Size :	20 ml 100 ml		 -20°C	 24 m
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Penicillin-Streptomycin Solution 100X

Cat N° :	L0022-020 L0022-100	Unit/Size :	20 ml 100 ml		 -20°C	 18 m
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- Other Antibiotics and packagings available on request.
- For your special formulation, please contact us so we can make your custom made product on request.

> *Composition available on our website www.biowest.net*

Serum

Cell Culture Media

Salt Solutions








Antibiotics

Cell Culture Reagents
& other products



**CELL CULTURE
REAGENTS
&
OTHER PRODUCTS**


LEGEND

State:	 Liquid	 Powder	 Frozen
Storage and shipping conditions:	 Room Temperature	 +8°C	 -20°C
Shelf life, in months:	 24 m		

TRYPSIN

Trypsin is a porcine pancreas-derived enzyme that is commonly used for the dissociation and disaggregation of adherent growing mammalian cells and tissues. The concentration of trypsin necessary to dislodge the cells from their substrate depends on the sensitivity of the cells.

Trypsin 0.25 % in PBS w/o Calcium w/o Magnesium w/ Phenol Red

Cat N° :	L0909-100	Unit/Size :	100 ml		 -20°C	 24 m
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Trypsin 0.25 % in PBS w/o Calcium w/o Magnesium w/o Phenol Red

Cat N° :	L0910-100	Unit/Size :	100 ml		 -20°C	 24 m
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Trypsin 0.25% - EDTA in HBSS w/o Calcium w/o Magnesium w/ Phenol Red

Cat N° :	L0931-100 L0931-500	Unit/Size :	100 ml 500 ml		 -20°C	 24 m
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Trypsin 0.25% - EDTA 0.02% in HBSS w/o Calcium w/o Magnesium w/ Phenol Red

Cat N° :	L0932-100	Unit/Size :	100 ml		 -20°C	 24 m
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Trypsin 2.5 % in HBSS w/o Calcium w/o Magnesium w/o Phenol Red

Cat N° :	X0920-100	Unit/Size :	100 ml		 -20°C	 24 m
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Trypsin-EDTA 1X in PBS w/o Calcium w/o Magnesium w/ Phenol Red

Cat N° :	L0930-100 L0930-500	Unit/Size :	100 ml 500 ml		 -20°C	 24 m
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Trypsin-EDTA 1X in PBS w/o Calcium w/o Magnesium w/o Phenol Red

Cat N° :	L0940-100 L0940-500	Unit/Size :	100 ml 500 ml		 -20°C	 24 m
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Trypsin-EDTA 10X

Cat N° :	X0930-100	Unit/Size :	100 ml		 -20°C	 24 m
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Trypsin - EDTA 1X Lyophilised w/ Sodium Chloride

Cat N° :	P0940-100GR	Unit/Size :	100 g	 	 -20°C	 24 m
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Trypsin 1:250 powder (porcine)

Cat N° :	P5957-100GR	Unit/Size :	100 g	 	 -20°C	 12 m
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Recombinant Trypsin-EDTA 1X in PBS w/o Calcium w/o Magnesium w/o Phenol Red

Cat N° :	L0941-100	Unit/Size :	100 ml		 -20°C	 24 m
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> *Composition available on our website www.biowest.net*

- Other packagings available on request
- For your special formulation, please contact us so we can make your custom made product on request

ACCUTASE




Accutase is a ready to use cell detachment solution developed to meet most demanding requirements for a gentle and effective detachment of adherent cells. It can be used as direct replacement for Trypsin, but has several advantages due to the more gentle detachment of the cells.

Features:

- Gentle & effective cell detachment
- Protection of surface epitopes for e.g. subsequent flow cytometry analysis
- Maximum protection for sensitive cell culture: primary, neuronal or stem cells
- No neutralization required
- No aliquotation needed, stable in the refrigerator for two months after thawing

Accutase combines proteolytic and collagenolytic enzyme activity. As it is non-mammalian and non-bacterial origin, it is an excellent choice for serum free cell cultures. Accutase can be used for the whole range of adherent cells. For a list of tested cell lines please visit : www.biowest.net

Accutase

Cat N° : L0950-100	Unit/Size : 100 ml		 -20°C	 24 m
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- Other packagings available on request

AMINO ACIDS AND VITAMINS

Amino acids, vitamins or non essential amino acids can be added to your basal medium. The final concentration of the MEM or BME should be 1X to enrich it and then this medium is used as a classical MEM or BME.

MEM Vitamins 100X w/o L-Glutamine

Cat N° : X0556-100	Unit/Size : 100 ml		 -20°C	 24 m
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MEM non Essential Amino Acids 100X w/o L-Glutamine

Cat N° : X0557-100	Unit/Size : 100 ml		 +8°C +2°C	 24 m
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> *Composition available on our website www.biowest.net*

- Other packagings available on request
- For your special formulation, please contact us. We can make your custom made product on request
- For specific vitamins and amino acids, please inquire availability, packagings and prices.

D-GLUCOSE MONOHYDRATE - DEXTROSE, CELL CULTURE TESTED

D-Glucose Monohydrate (Dextrose), cell culture tested

Cat N° :	P5030-500GR P5030-KG	Unit/Size :	500 g 1000 g		 Room Temp	 48 m
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- Other packagings available on request

GLUTAMINE

L-Glutamine is an essential amino acid required by virtually all mammalian and insect cells grown in culture. It is a crucial component of many cell culture media and serves as a major energy source for cells in culture. L-Glutamine is very stable as a dry powder and as a frozen solution.

However, in liquid media or stock solutions, L-Glutamine can degrade relatively rapidly. L-Glutamine is also more labile in cell culture solution than other amino acids.

Dipeptide derivatives of L-Glutamine (Stable Glutamine) prevent the intramolecular cyclization reaction associated with solutions of L-Glutamine. These derivatives are therefore stable in solution and allow the formulation of cell culture media containing L-Glutamine that may be stored at 4°C for extended periods. Solutions containing these derivatives can be even autoclaved without appreciable degradation of the product (30 minutes at 121°C results in <5% loss of the product).

The dipeptide derivatives are metabolized within the cells to yield L-Glutamine plus the second amino acid. This results in more consistent delivery of L-Glutamine to your cells and avoids toxic build-up of ammonia in your cell cultures. This feature can be especially important for ammonia-sensitive cell lines.

L-Glutamine 100X, 200mM

Cat N° :	X0550-100	Unit/Size :	100 ml		 -20°C	 24 m
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Glutamine stable 100X, 200mM

Cat N° :	X0551-100	Unit/Size :	100 ml		 -20°C	 24 m
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L-Glutamine

Cat N° :	P1012-100GR P1012-KG	Unit/Size :	100 g 1000 g		 Room Temp	 24 m
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L-Alanyl-L-Glutamine, stable Glutamine

Cat N° :	P1031-100GR	Unit/Size :	100 g		 Room Temp	 36 m
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- Other packagings available on request

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COLCEMID

Colcemid halts the division of cells in mitosis. It prevents the formation of the spindle apparatus responsible for cell division, thereby permitting an accumulation of metaphases.

Colcemid 10 µg/ml in PBS (Demecolcin)

Cat N° :	L0040-010 L0040-020 L0040-050	Unit/Size :	10 ml 20 ml 50 ml			
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> *Composition available on our website www.biowest.net*

- Other packagings available on request
- For your special formulation, please contact us so we can make your custom made product on request

PHYTOHAEMAGGLUTININ M - PHA-M

Phytohaemagglutinin is a lectin, extracted from red kidney beans, used for the stimulation of cell proliferation in lymphocyte culture. PHA-M also has a powerful erythroagglutinating property and it was originally used for separating leukocytes from whole blood.

Phytohaemagglutinin M - PHA-M

Cat N° :	L3010-005	Unit/Size :	5 ml			
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- Other packagings available on request

LYMPHOSEP

Lymphosep is designed for the simple, rapid isolation of lymphocytes from whole blood that has been diluted and treated with anti-coagulant or defibrinating agent.

Lymphosep, Lymphocyte Separation Media

Cat N° :	L0560-100 L0560-500	Unit/Size :	100 ml 500 ml			
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> *Composition available on our website www.biowest.net*

- Other packagings available on request
- For your special formulation, please contact us so we can make your custom made product on request

CELL CULTURE WATER

Cell Culture Water Pyrogen free

Cat N° :	L0970-100 L0970-500 L0970-1000	Unit/Size :	100 ml 500 ml 1000 ml			 48 m
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BIOGUARD

Bioguard is used in the disinfection of surfaces of laboratory apparatus and of CO2 incubator. Bioguard prevents contamination with and growth of fungi, bacteria, and their spores, mycoplasma and viruses including HIV and Hepatitis B. Bioguard is non-toxic and biodegradable.

we recommend :

- Bioguard-S to keep safe all common work surfaces.
- Bioguard-A to disinfect the water trays of common incubator types and the water required for humidity, potential source of contamination which can disperses in the incubator.

Bioguard - S

Cat N° :	D1010-1000	Unit/Size :	1000 ml			 60 m
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Bioguard - A

Cat N° :	D1020-100	Unit/Size :	100 ml		 -20°C	 24 m
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PHENOL RED

Phenol red is used as a pH indicator. The sodium salt of phenol red is used widely in culture media to identify changes from neutral to acidic pH values.

A solution of phenol red will have a yellow color at a pH of 6.4 or below and a red color at a pH of 8.2 and above.

Phenol Red Sodium Salt

Cat N° :	P5648-10GR	Unit/Size :	10 g			 48 m
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- Other packagings available on request

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Table for Addition of Sodium Bicarbonate

Cat N°	Description	Add° of Sodium Bicarbonate powder P2060	Add° of Sodium Bicarbonate 7,5% solution L0680
		g / L	ml / L
Cell Culture Media			
P0030	BME w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate	2,2	29,3
P0058	CMRL 1066 w/ L-Glutamine w/o Sodium Bicarbonate	2,2	29,3
P0061	DMEM Low Glucose w/ L-Glutamine w/o Sodium Bicarbonate w/ Sodium Pyruvate	3,7	49,3
P0095	DMEM F12 w/ L-Glutamine w/o Sodium Bicarbonate w/ 15 mM Hepes	1,2	16
P0102	DMEM High Glucose w/ L-Glutamine w/o Sodium Bicarbonate w/o Sodium Pyruvate	3,7	49,3
P0103	DMEM High Glucose w/ L-Glutamine w/o Sodium Bicarbonate w/o Sodium Pyruvate	3,7	49,3
P0120	Glasgow MEM BHK 21 w/ L-Glutamine w/o Sodium Bicarbonate w/o Tryptose Phosphate Broth	2,75	36,7
P0134	HAM's F12 w/ L-Glutamine w/o Sodium Bicarbonate	1,176	15,7
P0146	HAM's F10 w/ L-Glutamine w/o Sodium Bicarbonate	1,2	16
P0191	IMDM w/ L- Glutamine w/o Sodium Bicarbonate w/ 25 mM Hepes	3,024	40,3
P0390	McCoy's 5A w/ L-Glutamine w/o Sodium Bicarbonate	2,2	29,3
P0410	Medium 199 w/ Hanks' Salts w/o L-Glutamine w/o Sodium Bicarbonate	0,35	4,7
P0420	Medium 199 w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate	2,2	29,3
P0425	Medium 199 w/ Earles' Salts w/ L-Glutamine w/o Sodium Bicarbonate w/ 25mM Hepes	2,2	29,3
P0440	MEM Alpha Modification w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate	2,2	29,3
P0450	MEM w/ Earle's Salts w/ L-Glutamine w/ NEAA w/o Sodium Bicarbonate	2,2	29,3
P0451	MEM w/ Earle's Salts w/ L-Glutamine w/o NEAA w/o Sodium Bicarbonate	2,2	29,3
P0515	MEM w/ Hanks' Salts w/ L-Glutamine w/ NEAA w/o Sodium Bicarbonate	0,35	4,7
P0860	RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate	2	26,7
P0870	RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate	2	26,7
P0871	RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red	2	26,7
P0876	RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/25 mM Hepes w/o Phenol Red	2	26,7
P0880	RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red	2	26,7
P0883	RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Glucose	2	26,7

Cat N°	Description	Add ^o of Sodium Bicarbonate	
		g / L powder P2060	ml / L 7,5% solution L0680
Salt Solutions			
L0605	Hanks' Balanced Salt Solution w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/o Phenol Red	0,35	4,7
L0608	Hanks' Balanced Salt Solution w/ Calcium w/ Magnesium w/o Sodium Bicarbonate w/ Phenol Red	0,35	4,7
P0153	Hanks' Balanced Salts w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/o Phenol Red	0,35	4,7
P0154	Hanks' Balanced Salts w/ Calcium w/ Magnesium w/o Sodium Bicarbonate	0,35	4,7
X0112	Earle's Balanced Salt Solution 10X w/ Calcium w/ Magnesium w/o Sodium Bicarbonate	2,2 For 1X	29,3 For 1X
X0113	Earle's Balanced Salt Solution 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate	2,2 For 1X	29,3 For 1X
X0507	Hanks' Balanced Salt Solution 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/o Phenol Red	0,35 For 1X	4,7 For 1X
X0509	Hanks' Balanced Salt Solution 10X w/ Calcium w/ Magnesium w/o Sodium Bicarbonate w/ Phenol Red	0,35 For 1X	4,7 For 1X
X0513	Hanks' Balanced Salt Solution 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/ Phenol Red	0,35 For 1X	4,7 For 1X

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Table for Addition of L-Glutamine

Cat n°	Description	addition of L-Glutamine	
		g / L	ml / L
L0042	BME w/ Earle's Salts w/o L-Glutamine	0,292	10
L0064	DMEM Low Glucose w/o L-Glutamine w/ Sodium Pyruvate	0,584	20
L0090	DMEM F12 w/o L-Glutamine w/o Hepes	0,365	12,5
L0091	DMEM F12 w/o L-Glutamine w/o Hepes w/o Glucose	0,365	12,5
L0094	DMEM F12 w/o L-Glutamine w/ 15 mM Hepes	0,365	12,5
L0096	DMEM F12 w/o L-Glutamine w/ 25 mM Hepes	0,365	12,5
L0100	DMEM High Glucose w/o L-Glutamine w/ 25mM Hepes	0,584	20
L0101	DMEM High Glucose w/o L-Glutamine w/o Sodium Pyruvate	0,584	20
L0106	DMEM High Glucose w/o L-Glutamine w/ Sodium Pyruvate	0,584	20
L0136	HAM's F12 w/o L-Glutamine	0,146	5
L0145	HAM's F10 w/o L-Glutamine	0,146	5
L0192	IMDM w/o L- Glutamine w/o Hepes	0,584	20
L0222	Glasgow MEM BHK 21 w/o L-Glutamine w/o Tryptose Phosphate Broth	0,292	10
L0300	Leibovitz L-15 Medium w/o L-Glutamine	0,3	10,25
L0356	Medium 199 w/ Earles' Salts w/o L-Glutamine	0,1	3,4
L0430	MEM w/ Earle's Salts w/o L-Glutamine w/NEAA	0,292	10
L0440	MEM w/ Earle's Salts w/o L-Glutamine	0,292	10
L0445	MEM w/ Earle's Salts w/o L-Glutamine w/ 25mM Hepes	0,292	10
L0465	MEM w/ Hanks' Salts w/o L-Glutamine	0,292	10
L0470	MEM w/ Hanks' Salts w/o L-Glutamine w/ 25mM Hepes	0,292	10
L0476	MEM Alpha w/o L-Glutamine w/o Ribunucleosides w/o Deoxyribonucleosides	0,292	10
L0490	RPMI 1640 w/o L-Glutamine w/ 25 mM Hepes	0,3	10,25
L0492	RPMI 1640 Dutch Modification w/o L-Glutamine w/ 1g/l Sodium Bicarbonate w/ 20mM Hepes	0,3	10,25
L0501	RPMI 1640 w/o L-Glutamine	0,3	10,25
L0503	RPMI 1640 w/o L-Glutamine w/o Folic Acid	0,3	10,25
L0505	RPMI 1640 w/o L-Glutamine w/o Phenol Red	0,3	10,25
P0410	Medium 199 w/ Hanks' Salts w/o L-Glutamine w/o Sodium Bicarbonate	0,1	3,4
P0870	RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate	0,3	10,25
P0871	RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red	0,3	10,25
P0875	RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate w/ 25mM Hepes	0,3	10,25

addition of L-Glutamine powder P1012

addition of L-Glutamine 100X, 200mM solution X0550

Standard Terms of Sale

The standard terms of sale and delivery shall be deemed to have been accepted for any order placed with our company. In the event of dispute, our terms cancel any conflicting clauses and terms printed on the orders or correspondence from buyers. Amendments of the initial agreement or any secondary agreement shall be valid only if they have been entered into in writing.

1- Products

The specifications and figures mentioned in our catalogues are given for information and without commitment. Biowest reserves the right to change its products without notice, depending on improvements imposed by the technical development.

2- Orders

Orders may be sent by letter, fax or e-mail. Orders shall be final only when Biowest has confirmed them in writing. They must include :

- the numbers of our catalogues or our offers. If the description is vague, if we ourselves have to make a choice, we disclaim liability on this account. The buyer shall bear any costs of return for the resulting non-compliance.
- delivery and invoicing addresses
- Inter-community VAT number

3- Deliveries

3.1- Delivery time

Delivery time shall be confirmed upon receipt of your order. If the products are not in stock, a delivery time shall be proposed for information, subject to accidental cases and force majeure. No penalty for late performance or damage may be claimed in the event said deliver times are not respected. Biowest shall choose the method of dispatch that it considers to be the most suitable for its customer, if the latter has not expressed special requirements.

3.2- Accidental cases and force majeure

Biowest shall be released from its obligation to deliver in the event of any accidental case or force majeure event that impedes either the manufacturing, dispatch or import into France. A force majeure event means any event beyond our control, which results in delaying or preventing the performance that could not be reasonably controlled or avoided.

4- Price and invoicing

The prices on catalogues, printed leaflets, price lists or on-line are given for information. Biowest reserves the right to amend same, without notice. Our prices are guaranteed for the term of validity of the offer or the estimate, apart from the change in the price of raw materials, exchange rates of foreign currencies or customs duties. The prices invoiced shall always be those in force on the date of the actual delivery.

Unless otherwise specified in writing, our prices are quoted net and excluding tax. Transport costs are defined in relation to volumes and end destinations.

5- Payment

5.1- Terms and conditions

Our invoices are payable by cheque, bank or postal transfer, revocable letter of credit, within 30 days, date of invoicing net and without discount, unless otherwise agreed in writing. Biowest reserves the right to claim an advance payment or a part payment prior to the fulfilment of the order.

5.2- Penalty clause and event of default clause

By express agreement and except with Biowest's prior agreement, the non payment of an invoice at due date shall give rise, by operation of law, regardless of the method of payment :

- to a minimum interest of 3 times the legal interest rate set by decree on 1 January of each year,
- The immediate payability of all outstanding amounts.

Costs, outlay and expenses incurred by Biowest to obtain the payment of goods shall be borne by the customer under Article 700 of the New French Code of Civil Procedure (French acronym N.C.P.C.): fixed allowance for recovery costs : EUR 40. Moreover, pending regularisation, Biowest reserves the right to suspend any subsequent deliveries.

6- Warranty of services and reservations

6.1- Claims

The customer must check upon receipt of the products that the delivery is indeed compliant with its order. Any claim relating to transport should be made to our services within 48 hours and mentioned on the carrier's receipt. For any other non-apparent defect, we should be notified thereof within a maximum period of 3 months after receipt of the products and product storage instructions should be respected pending our instructions.

6.2 – Claim for partially thawed Serum

We do not accept claims if Animal Serum is delivered partially thawed, and we will not replace it free of charge, as our tests show a very good stability of the product even in these conditions.

6.3- Return

No return shall be accepted without the prior and written agreement of our sales department, which shall specify the terms and conditions of return. The returned products shall be credited, less a fixed amount for the costs of control and return to stock of 15% of the sale price, with a minimum of EUR 35 and only if they are in their original condition.

6.4- Scope of the warranty

The user must decide that said product is suitable for its specific application. The products of our catalogue are devised for scientific purposes only (use in-vitro exclusively). They may not be used as drugs, annex therapeutical products, pharmaceutical or cosmetic preparations, farm product and human or veterinary use products. The buyer shall be solely responsible for their use.

6.5- Transfer of risks

Our goods and their packaging shall always travel at the buyer's risks, even if they are dispatched carriage paid. We disclaim any liability for alterations occurring during transport. In the event of any damage, the consignee shall be responsible for notifying the carrier who made delivery of the losses and damage observed upon arrival, by registered letter within three days following receipt of the goods, in compliance with the regulations of Article 105 of the French Commercial Code and in general for bringing any claim against the carrier.

7- Retention of title clause

The seller reserves title to the goods until the price thereof in principal and interest has been paid in full. Failing payment of the price at the agreed due date, the seller may take back the goods. The sale shall be cancelled by operation of law if the seller sees fit and it shall be entitled to part payments already paid in consideration of any use of the goods by the buyer.

8- Disputes

Courts in the jurisdiction of the place of the company's registered office shall have sole jurisdiction in the event of a dispute of any kind or a dispute relating to the formation or fulfilment of the order. French law only shall govern orders placed with Biowest.

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P0750-N1L	For 1 L Dulbecco's Phosphate Buffered Saline w/o Calcium w/o Magnesium39
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P0871-N10L	For 10 L RPMI 1640 w/o L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red34
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P0876-N10L	For 10 L RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/ 25 mM HEPES w/o Phenol Red35
P0876-N1L	For 1 L RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/ 25 mM HEPES w/o Phenol Red35
P0880-N10L	For 10 L RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red34
P0880-N1L	For 1 L RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Phenol Red34
P0883-N10L	For 10 L RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Glucose35
P0883-N1L	For 1 L RPMI 1640 w/ L-Glutamine w/o Sodium Bicarbonate w/o Glucose35
P0940-100GR	100 g Trypsin - EDTA 1X Lyophilised w/ Sodium Chloride47
P1012-100GR	100 g L-Glutamine49
P1012-KG	1 kg L-Glutamine49
P1031-100GR	100 g L-Alanyl-L-Glutamine, stable Glutamine49
P2035-500GR	500 g Potassium Chloride42
P2060-500GR	500 g Sodium Bicarbonate, cell culture tested42
P2064-N5L	For 5 l Sodium Chloride (for dilution 9 g/l)42
P2066-KG	1 kg Sodium Chloride42
P4020-1GR	1 g Gentamicin Sulfate44
P4020-5GR	5 g Gentamicin Sulfate44
P4030-250MG	250 mg Amphotericin B44
P5030-500GR	500 g D-Glucose Monohydrate -Dextrose, cell culture tested49
P5030-KG	1 kg D-Glucose Monohydrate -Dextrose, cell culture tested49
P5455-100GR	100 g HEPES, cell culture tested42
P5455-500GR	500 g HEPES, cell culture tested42
P5455-KG	1 kg HEPES, cell culture tested42
P5648-10GR	10 g Phenol Red Sodium Salt51
P5957-100GR	100 g Trypsin 1:250 powder (porcine)47
P6140-100GR	100 g Human Serum Albumin19
P6140-500GR	500 g Human Serum Albumin19
P6140-KG	1 kg Human Serum Albumin19
P6154-100GR	100 g BSA Lyophilised pH ~717
P6154-500GR	500 g BSA Lyophilised pH ~717
P6154-KG	1 kg BSA Lyophilised pH ~717
P6155-100GR	100 g BSA Protease Free Lyophilised17
P6155-500GR	500 g BSA Protease Free Lyophilised17
P6155-KG	1 kg BSA Protease Free Lyophilised17

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P6156-100GR	100 g BSA Fatty Acids Free Lyophilised	17
P6156-500GR	500 g BSA Fatty Acids Free Lyophilised	17
P6156-KG	1 kg BSA Fatty Acids Free Lyophilised	17
S0250-100	100 ml Bovine Serum (France Origin)	18
S0250-500	500 ml Bovine Serum (France Origin)	18
S0260-500	500 ml Bovine Plasma w/ Sodium Citrate	19
S0400-500	500 ml Calf Serum	18
S0500-500	500 ml Chicken Serum	18
S0750-500	500 ml New Born Calf Serum	18
S0800-500	500 ml Donor Foal Serum	18
S0900-500	500 ml Donor Horse Serum	18
S0910-100	100 ml Horse Serum	18
S0910-500	500 ml Horse Serum	18
S1520-100	100 ml FBS USA	13
S1520-500	500 ml FBS USA	13
S1560-100	100 ml FBS Chile, USDA approved	13
S1560-500	500 ml FBS Chile, USDA approved	13
S1580-100	100 ml FBS Uruguay	13
S1580-500	500 ml FBS Uruguay	13
S1600-100	100 ml FBS Central America, USDA approved	13
S1600-500	500 ml FBS Central America, USDA approved	13
S1610-100	100 ml FBS Dominican Republic	13
S1610-500	500 ml FBS Dominican Republic	13
S1650-100	100 ml FBS Mexico, USDA approved	13
S1650-500	500 ml FBS Mexico, USDA approved	13
S1700-100	100 ml FBS Australia Origin, USDA approved	13
S1700-500	500 ml FBS Australia Origin, USDA approved	13
S1780-100	100 ml FBS Ireland	13
S1780-500	500 ml FBS Ireland	13
S1810-100	100 ml FBS South America	13
S1810-500	500 ml FBS South America	13
S181A-100	100 ml FBS Biopharm	12
S181A-500	500 ml FBS Biopharm	12
S181B-100	100 ml FBS South America, Premium	12
S181B-500	500 ml FBS South America, Premium	12
S181D-100	100 ml FBS South America, Dialysed	15
S181D-500	500 ml FBS South America, Dialysed	15
S181F-100	100 ml FBS South America, Charcoal Stripped	14
S181F-500	500 ml FBS South America, Charcoal Stripped	14
S181G-100	100 ml FBS South America, Gamma Irradiated	14
S181G-500	500 ml FBS South America, Gamma Irradiated	14
S181H-100	100 ml FBS South America, Heat Inactivated	14
S181H-500	500 ml FBS South America, Heat Inactivated	14
S181L-100	100 ml FBS South America, Lipid Depleted	15
S181L-500	500 ml FBS South America, Lipid Depleted	15
S181R-100	100 ml FBS South America, Iron Supplemented	15
S181R-500	500 ml FBS South America, Iron Supplemented	15
S181S-100	100 ml FBS South America, Embryonic Stem Cells tested	15
S181S-500	500 ml FBS South America, Embryonic Stem Cells tested	15
S181T-100	100 ml FBS South America, Tetracycline free	15
S181T-500	500 ml FBS South America, Tetracycline free	15
S1820-100	100 ml FBS France	13
S1820-500	500 ml FBS France	13
S1860-100	100 ml FBS South America, Ultra-low Endotoxin	13
S1860-500	500 ml FBS South America, Ultra-low Endotoxin	13
S2000-500	500 ml Goat Serum	18
S2140-100	100 ml Rat Plasma w/ Lithium Heparin	19
S2150-050	50 ml Rat Serum	18
S2150-100	100 ml Rat Serum	18
S2150-500	500 ml Rat Serum	18
S2160-050	50 ml Mouse Serum	18
S2160-100	100 ml Mouse Serum	18
S2160-500	500 ml Mouse Serum	18
S2162-100	100 ml Mouse Plasma w/ Lithium Heparin	18
S2170-500	500 ml Donkey Serum	18
S2300-500	500 ml Lamb Serum	18
S2350-500	500 ml Sheep Serum	18
S2400-500	500 ml Pig Serum	18
S2450-010	10 ml Guinea Pig Serum	19
S2450-100	100 ml Guinea Pig Serum	19
S2500-500	500 ml Rabbit Serum (France Origin)	18
S2600-500	500 ml Rabbit Plasma w/ EDTA Tetrasodium Salt	19
S381G-N0.05L	3 g Instant Sterile FBS South America - For 50 ml	16
S381G-N0.5L	30 g Instant Sterile FBS South America - For 500 ml	16

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S382G-N0.05L	3 g Instant Sterile FBS France - For 50 ml	16
S382G-N0.5L	30 g Instant Sterile FBS France - For 500 ml	16
S4180-100	100 ml Human Plasma pooled	19
S4180-500	500 ml Human Plasma pooled	19
S4190-100	100 ml Human Serum AB male HIV tested	19
S4200-100	100 ml Human Serum HIV tested	19
S6000-020	20 ml FreeAdd 5X	16
S6000-100	100 ml FreeAdd 5X	16
X0112-500	500 ml Earle's Balanced Salts 10X w/ Calcium w/ Magnesium w/o Sodium Bicarbonate	40
X0113-500	500 ml Earle's Balanced Salts 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate	40
X0507-500	500 ml HBSS 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/o Phenol Red	41
X0509-500	500 ml HBSS 10X w/ Calcium w/ Magnesium w/o Sodium Bicarbonate w/ Phenol Red	41
X0510-500	500 ml HBSS 10X w/o Calcium w/o Magnesium w/ Sodium Bicarbonate w/o Phenol Red	41
X0513-500	500 ml HBSS 10X w/o Calcium w/o Magnesium w/o Sodium Bicarbonate w/ Phenol Red	41
X0515-100	100 ml Dulbecco's Phosphate Buffered Saline 10X w/o Calcium w/o Magnesium	39
X0515-500	500 ml Dulbecco's Phosphate Buffered Saline 10X w/o Calcium w/o Magnesium	39
X0520-500	500 ml Dulbecco's Phosphate Buffered Saline 10X w/ Calcium w/ Magnesium	39
X0550-100	100 ml L-Glutamine 100X, 200mM	49
X0551-100	100 ml Glutamine stable 100X, 200mM	49
X0556-100	100 ml MEM Vitamins 100X w/o L-Glutamine	48
X0557-100	100 ml MEM non Essential Amino Acids 100X w/o L-Glutamine	48
X0915-100	100 ml Trypsin 2.5 % in PBS w/o Calcium w/o Magnesium w/o Phenol Red	47
X0920-100	100 ml Trypsin 2.5 % in HBSS w/o Calcium w/o Magnesium w/o Phenol Red	47
X0930-100	100 ml Trypsin-EDTA 10X	47



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The Serum Specialist

Fetal Bovine Serum
(South America Origin)

Sterile Filtered
Cat.N° : S1810-500
Lot N° : S00000S1810
Exp. Date : 00/0000
Volume : 500 ml
Storage : -20°C

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Not for drug, human or veterinary use.

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The Serum Specialist

RPMI 1640

w/o L-Glutamine
Sterile Filtered
Cat.N° : L0501-500
Lot n° : S00000L0501
Expiration : 00/0000
Volume : 500ml
Storage : +2°C/+8°C

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The Serum Specialist

**Dulbecco's Phosphate
Buffered Saline**

w/o Magnesium, w/o Calcium
Sterile Filtered
Cat.N° : LD615-500
Lot n° : S00000LD615
Expiration : 00/0000
Volume : 500 ml
Storage : +20°C

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Not for drug, human or veterinary use.

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The Serum Specialist

DMEM High Glucose

w/o L-Glutamine
w/ Sodium Pyruvate
Sterile Filtered
Cat.N° : L0105-500
Lot N° : S00000L0105
Exp. Date : 00/0000
Volume : 500 ml
Storage : +2°C/+8°C

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