

Product Information

Fetal Bovine Serum Bioprocess
 Cat. No. FBS-24B, FBS-24A

General Information

Serum is the blood component obtained after coagulation and removal of cellular components. Besides serum proteins it contains a broad range of growth factors, amino acids and hormones. This comprehensive mix makes serum one of the most important supplements for supporting cell growth and proliferation in *in vitro* cell culture. Fetal bovine serum (FBS) is of special interest, being especially rich in important growth factors and low in antibodies, that may influence the cell culture work.

FBS Bioprocess is a product of highest quality. Manufactured under the most stringent safety standards, it complies with all current directives and regulations that are essential for the use of bovine-derived products in biopharmaceutical or diagnostic industries.

FBS Bioprocess is subject to strictest quality controls and is tested according to Title 9 of the Code of Federal Regulations (9CFR) and European Medical Agency (EMA). Due to these broad range test panels, we minimize any contamination risk for the biopharmaceutical manufacturing processes. For maximum inactivation of viral contaminants, additional treatment by gamma irradiation is possible. Comprehensive and detailed documentation of traceability and production process is available upon request.

Applications:

- Biopharmaceutical industry
- Vaccine production
- Manufacturing of recombinant antibodies and growth factors
- Advanced cell therapy products

Product	Origin	Treatment	Volume	Cat. No.
Fetal Bovine Serum Bioprocess	Collected in USA	Tested according to 9CFR	100 ml 500 ml	FBS-24B FBS-24A

Product Specifications

Appearance	Clear amber liquid
Virus tested for	Parainfluenza Type 3 (PI-3), Bovine Virus Diarrhoea Virus (BVD-V), Bovine Herpes Virus Type 1 (BHV-1), Blue Tongue Virus (BTV), Bovine Adenovirus (BAV), Bovine Reovirus (BRV), Bovine Parvovirus (BPV), Bovine Respiratory Syncytial Virus (BRSV), Rabies Virus
Storage and shelf life	Store at $\leq -15^{\circ}\text{C}$. Avoid repeated freeze-thaw cycles. Preparation of aliquots recommended. Once opened store at 4°C and use within 4-6 weeks.
Shipping conditions	Frozen (Dry ice)
Thawing	Overnight at $+2^{\circ}\text{C}$ to $+8^{\circ}\text{C}$. Swirl gently to homogenize.

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Additional Optional Treatments

Heat Inactivation:

Capricorn Scientific also offers heat-inactivated FBS. This process inactivates the complement system, antibodies, and other active enzymes. Heat Inactivation must be done in a carefully controlled process to maintain the cell growth-promoting properties of serum and to reduce the formation of unwanted precipitates.

The process involves heating the serum in a shaking water bath at exactly +56°C for 30 minutes. Shaking helps to prevent the formation of protein and other forms of precipitates. After 30 minutes the serum is cooled back down to room temperature as quickly as possible to avoid an over-exposure to heat which can damage growth factors and vitamins, etc.

Gamma Irradiation:

Capricorn Scientific has established process parameters and controls for maximum inactivation of contaminants by an innovative gamma irradiation process in small sized boxes at 25 – 35 kGy. When FBS bottles are arranged in a pallet during gamma irradiation, high irradiation doses (58 kGy) are necessary to irradiate the centrally located bottles with the required dose (>30 kGy). This and the associated higher temperatures may affect the serum quality. If the irradiation is performed in single boxes, the maximum dose of irradiation does not exceed 38.7 kGy. Gentle irradiation as used by Capricorn Scientific is less likely to affect final serum quality.

Quality Control

Only serum batches which pass our strict quality control are released for sale. Standard parameters that are determined include pH, osmolality, content of protein, albumin, IgG and hemoglobin, endotoxin level, sterility, mycoplasma detection, and virus testing.

Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Help Needed?

If you have any further questions regarding this product, please do not hesitate to contact our cell culture experts by email (techservice@capricorn-scientific.com) or phone (+49 6424 944640).