PRODUCT DESCRIPTION

Fetal Bovine Serum (FBS) is a high-quality, nutrient-rich supplement commonly used in cell culture applications. It is derived from the blood of healthy bovine fetuses and processed under strict quality controls to maintain its biological activity and integrity. FBS provides essential growth factors, hormones, vitamins, and proteins necessary for the optimal growth and maintenance of a wide variety of mammalian cells in vitro.

COUNTRY OF ORIGIN

The Biowest USA Fetal Bovine Serum is sourced from multiple countries, following rigorous animal health and safety protocols.

Catalog Number	Description	Origin(s)
S1480	Fetal Bovine Serum	United States
S1490	Qualified Fetal Bovine Serum	
S1620	Fetal Bovine Serum	Canada, Mexico, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, Chile
S1690	Qualified Fetal Bovine Serum	
S1610	Fetal Bovine Serum	Australia

INTENDED USE

This product is for in vitro research or further manufacturing only. It is not for human or animal consumption or for use as an Active Pharmaceutical Ingredient. Fetal Bovine Serum is widely used in cell culture applications for the growth and maintenance of mammalian cells, providing essential nutrients and factors required for various research and industrial applications.

COLLECTION SOURCE

Fetal Bovine Serum is derived from clotted whole blood, aseptically collected from the fetus via cardiac puncture. The serum is collected and treated in compliance with USDA regulations. Our vertical integration system ensures full traceability of the serum throughout all stages—from collection to production and final packaging, allowing us to guarantee the origin and quality of each batch.

QUALITY CONTROL PARAMETERS

1.1	pH: monitored and reported for each batch, with specifications provided in the Certificate of Analysis (CoA).
1.2	Osmolality: determined by the lowering of the freezing temperature, calibrated against standard solutions. Osmolality specifications are provided in the Certificate of Analysis.
1.3	Endotoxin: tested using USP 85 Photometric Quantitative Techniques. Test results are reported in the Certificate of Analysis.
1.4	Hemoglobin: measured by spectrophotometry. Results are provided in the Certificate of Analysis.
1.5	Total Protein: determined using a colorimetric assay. Results are reported in the Certificate of Analysis.
1.6	Sterility Testing: tested for the absence of aerobic and anaerobic bacteria, fungi, and yeast in compliance with 9CFR regulations. 9CFR regulations ensure that FBS is free from harmful microbial contamination, making it safe for use in sensitive cell culture applications.
1.7	Mycoplasma: tested via culture-based methods or PCR (Polymerase Chain Reaction), depending on customer requirements. Tested for absence of Mycoplasma.
1.8	Virus Testing: Testing is performed by inoculating permissive cell cultures and following the 9CFR 113.53c, 113.46, and 113.47 requirements. Each batch undergoes virus testing for the following pathogens:

	• Bovine Viral Diarrhea (BVD) • Infectious Bovine Rhinotracheitis (IBR) / BHV-1 • Parainfluenza Type 3 (PI3) • Bluetongue virus • Bovine Respiratory Syncytial Virus (BRSV) • Reovirus • Rabies virus
1.9	Cell Culture Testing: Fetal Bovine Serum is assessed for its biological performance using cell culture. The serum is tested for cell growth, colony-forming efficiency, and cloning efficiency across a variety of cell lines. Cell Lines Tested: • CHO-K1 (Chinese Hamster Ovary) • L929 (Fibroblast - Mouse / Macrophage) • SP2/0-AG14 (Mouse / Lymphoma) • MRC-5 (Human / Lung)
1.10	Other Testing: Additional testing may be available upon request depending on customer needs.
FILTRATION	
Final Filter Size: 0.1µm × 3	
TREATMENT PROCESS	
Not Applicable	
STORAGE CONDITIONS	
Store at ≤ -10°C, protected from light to maintain the serum's integrity.	
SHELF LIFE	
5 years from the date of manufacture when stored under the recommended conditions.	
HANDLING INSTRUCTIONS	
2.1	Thawing: Thaw the serum in a refrigerator (2°C to 8°C) or at room temperature. Avoid rapid thawing methods to preserve protein integrity.
2.2	Aliquoting: For optimal preservation, aliquot the serum after thawing using aseptic techniques.
2.3	Storage after Thawing: The serum is recommended for use immediately after thawing. If all the serum is not used, it can be stored at +2°C to +8°C for up to 26 weeks without a significant decrease in cell culture performance, provided sterility is maintained.
2.4	Repeated Freeze/Thaw Cycles: To maintain serum quality, avoid repeated freeze/thaw cycles. Always refreeze aliquots, not the entire bottle.
PRECAUTIONS AND SAFETY	
3.1	For Research Use Only: Not for human or animal consumption.
3.2	Protective Equipment: Always wear appropriate PPE, such as gloves, lab coats, and face protection, when handling the serum.
3.3	Aseptic Handling: Ensure that serum is handled under aseptic conditions (e.g., laminar flow hood) to prevent contamination.
REGULATORY INFORMATION	
Fetal Bovine Serum complies with relevant regulations set by the USDA and other international bodies for collection, processing, and use.	
DISPOSAL INSTRUCTIONS	
Dispose of unused serum and packaging according to local regulations for biological materials and hazardous waste.	

CERTIFICATE OF ANALYSIS (CoA)

A Certificate of Analysis is provided with each batch and contains detailed specifications, including test results for sterility, endotoxin levels, and other quality control parameters.

DISCLAIMER

This product is not intended as an Active Pharmaceutical Ingredient (API). It is intended for research, diagnostics, and medical device manufacturing only. Before use, users should refer to the Certificate of Analysis (CoA) for specific lot details.

For further information or inquiries, please contact Biowest USA Customer Service.