

# Technical Data Sheet

## Newborn Calf Serum



### Product Description

Newborn Calf Serum is a premium-quality serum aseptically collected from the clotted whole blood of healthy calves. Sourced from the United States and New Zealand, the serum undergoes rigorous quality control processes to guarantee consistency, purity, and full traceability. It is specially formulated to supply essential nutrients, hormones, and growth factors that support optimal cell growth and maintenance *in vitro*.

### Intended Use

- For *in vitro* research or further manufacturing use only.
- **Not for human or animal consumption.**
- **Not for use as an Active Pharmaceutical Ingredient (API).**

### Country of Origin & Catalog Information

Newborn Calf Serum is sourced from the United States and New Zealand, following stringent animal health and safety standards to ensure product integrity and compliance. Full CoA is provided for every batch.

Catalog	Description
PS-NB1	Newborn Calf Serum

### Collecting & Processing

- **Source:** Whole clotted blood collected via cardiac puncture from bovine calves.
- **Collection Method:** Aseptic, USDA-compliant protocols.
- **Traceability:** Manufactured using high-quality raw materials sourced from approved external suppliers and processed under strict in-house quality control.
- **Filtration:** Final filtration is carried out using 0.2  $\mu\text{m}$  filters to ensure sterility.

### Quality Control & Testing

- pH: standard pH measurement
- Osmolality: determined by the lowering of the freezing point and calibrated against standard solutions
- Endotoxin: Tested using USP <85> Photometric Quantitative Techniques.
- Hemoglobin: measured by spectrophotometry.
- Total Protein: determined using a colorimetric assay.
- Mycoplasma: tested via culture-based methods or PCR (Polymerase Chain Reaction), depending on customer requirements.
- Sterility Testing: tested for the absence of aerobic and anaerobic bacteria, fungi, and yeast in compliance with 9CFR regulations.

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- **Virus Testing:** Each batch undergoes virus testing following the 9CFR 113.53c, 113.46, and 113.47 requirements: Bovine adenovirus, Bovine parvovirus, Bovine Respiratory Syncytial Virus (BRSV), Bovine Viral Diarrhea (BVD), Bluetongue virus, Infectious Bovine Rhinotracheitis (IBR)/ BHV-1, Parainfluenza Type 3 (PI3), Reovirus and Rabies virus.
- **Custom Testing:** Additional or application-specific testing is available upon request.

### Optional Treatment-Heat Inactivation

Heat Inactivation is available upon request. The process involves heating the serum to 56°C for 30 minutes to inactivate complement proteins and other components that may interfere with certain cell lines.

- **Color Change:** A visible change in serum color is normal and does not impact quality.
- **Suitability:** Users should confirm suitability for their specific applications prior to ordering.
- **Quality Assurance:** Heat-inactivated animal sera are produced and tested under the same rigorous quality standards as non-heat-inactivated sera.

### Handling & Storage Conditions

- **Storage Conditions:** Store at  $\leq -10^{\circ}\text{C}$ , protected from light.
- **Shelf life:** 5 years from the date of manufacture when stored properly.
- **Thawing & Use:** Thaw in a refrigerator ( $2^{\circ}\text{C}$  to  $8^{\circ}\text{C}$ ) or at room temperature. Avoid rapid thawing to prevent protein degradation.
- **Aliquoting & Short-Term Storage:** Aliquot under aseptic conditions immediately after thawing. After thawing, store at  $+2^{\circ}\text{C}$  to  $+8^{\circ}\text{C}$  for up to 26 weeks (maintaining sterility).
- **Avoid Repeated Freeze-Thaw Cycles:** Use aliquots to avoid compromising serum quality.

### Safety & Regulatory Compliance

- **For Research Use Only:** Not intended for human or veterinary use
- **Protective Equipment:** Always wear appropriate PPE, such as gloves, lab coats, and face protection, when handling the serum.
- **Aseptic Handling:** Handle under sterile conditions (e.g., laminar flow hood) to prevent contamination.
- **Regulatory Information:** This product complies with USDA and applicable international regulations governing the sourcing, processing, and use of animal-derived materials.

### Disposal Instructions

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Dispose of unused serum and packaging in accordance with local, state, or federal regulations for biological or hazardous materials.

### Certificate of Analysis

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

### Disclaimer

This product is for research or further manufacturing use only. It is not approved for diagnostic, therapeutic, food, or veterinary applications, and is not classified as an Active Pharmaceutical Ingredient (API). Refer to the CoA for detailed product specifications and ensure compatibility with your intended use.

*For further information or inquiries, please contact Peak Serum Customer Service.*