Bovine Calf Serum, US Origin

HYCLONE SERA

HyClone™ Bovine Calf Serum is available with or without iron supplementation. Bovine calf serum products contain exceptionally high levels of transferrin, which, when supplemented, can provide three to four times as much available iron as FBS. In many applications, the performance of calf serum will equal or even surpass that of FBS.

Bovine Calf Serum is filtered through three sequential 100 nm (0.1 µm) pore size-rated filters. Before dispensing, each lot of serum is pooled using true pool technology to ensure uniformity and consistency between bottles (Fig 1).

Key features of Bovine Calf Serum, US Origin:

- Cost-efficient alternative to FBS
- Sourced in the USA
- Complete traceability back to original source
- Low in antibodies and high in growth factors
- Virus panel testing according to 9 CFR 113.53



Fig 1. Bovine Calf Serum, US Origin.

Product storage and handling

Serum should be stored at -10°C or lower. Once thawed, serum should be stored at 2°C to 8°C for up to six weeks in order to maintain quality. If the serum needs to be stored longer than six weeks after opening, it is recommended to aliquot the serum into convenient volumes and refreeze. Handle bottles that have been stored in the freezer carefully. Avoid large temperature shifts and protect the serum from exposure to light. Refer to safety data sheet for any safety recommendations. Storage requirements are listed on the product label.

Thawing

Remove serum from storage at -10°C or lower and place in a refrigerator overnight at 2°C to 8°C. Transfer the serum to a 37°C water bath, agitate periodically to mix the solutes concentrated at the bottom of the container. Do not hold the serum at 37°C any longer than necessary after thawing. Thawing serum in a bath above 40°C without mixing can denature the concentrated proteins in the bottom of the container and precipitates might form in the bottle. Thawing serum at higher temperatures is not recommended.

Alternatively, bottles can be placed directly from storage at -10°C or lower into a 37°C water bath. Bottles should be agitated to enhance mixing and thawing. Turbidity and flocculent material might be present after thawing or after prolonged storage.

Experience indicates that regardless of the method used to thaw serum, it is critical that it is mixed during the thawing process to prevent the formation of gradients and subsequent precipitation. Because of differences in thawing rates of different components, serum will form a gradient if it is not mixed as it thaws. If serum is allowed to remain in such a gradient state, precipitation is likely to occur.

General culture recommendations

Supplementation of classical media such as Dulbecco's Modified Eagle's Medium (DMEM) is recommended at a range between 5% and 10% Bovine Calf Serum to support culture of a wide variety of cell lines and applications.

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Quality control testing

Bovine Calf Serum is assayed for gamma globulin, alkaline phosphatase, lactate dehydrogenase, glutamic pyruvic transaminase (SGPT), glutamic oxaloacetic transaminase (SGOT), pH, total protein, albumin, blood urea nitrogen, creatinine, total bilirubin, sodium, potassium, calcium, chloride, phosphorus, osmolality, iron, total iron binding capacity (TIBC), percent saturation, glucose, and IgG. Assays are subject to change without notice.

Test specifications are listed in Table 1. Results are provided as a courtesy for information only.

Table 1. Test specifications

Endotoxin (Limulus amebocyte lysate gel clot assay)	≤ 10 EU/mL
Hemoglobin (spectrophotometric)	≤ 10 mg/dL
Sterility testing (current USP)	
Bacteria and fungi	No growth
Virus testing (9 CFR 113.53)	
Fluorescent antibody	
Bluetongue	Not detected
Bovine adenovirus	Not detected
Bovine parvovirus	Not detected
Bovine respiratory syncytial virus	Not detected
Bovine viral diarrhea virus	Not detected
Rabies	Not detected
Reovirus	Not detected
Cytopathogenic agents (e.g., IBR)	Not detected
Hemadsorbing agents (e.g., PI3)	Not detected
Mycoplasma	
Large volume, direct culture	Not detected
Hoechst™ DNA stain	Not detected
Certificate of suitability	Included

Related products

HyClone classical media

HyClone classical media are manufactured using ISO 9001- and ISO 13485-certified processes. All raw material components have passed strict quality control testing to ensure the appropriate level of quality. The classical media are hydrated using purified process water and have undergone 0.1 µm sterile filtration.

HyClone phosphate buffered saline (PBS)

Our PBS products are manufactured using ISO 9001- and ISO 13485-certified processes. The products have full traceability and documented origin of all formula ingredients.

HyClone trypsin protease

Our trypsin protease is derived from porcine pancreas and is gamma irradiated prior to hydration and filling. The product is formulated without calcium and magnesium.

Ordering information

Product	Size	Product code
HyClone Bovine Calf Serum, US Origin	100 mL	SH30073.02
	500 mL	SH30073.03
	1000 mL	SH30073.04
HyClone Iron-Supplemented Bovine Calf Serum, US Origin	100 mL	SH30072.02
	500 mL	SH30072.03
	1000 mL	SH30072.04

Find certificates of analysis, safety data sheets, standard formulations, product inserts, and protocols at cytiva.com/hyclonecerts.

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