

## Product Information

Newborn Calf and Calf Serum

Cat. No. NCS-1A, NCS-1B, NCS-1D, NCS-HI-1A, NCS-HI-1B, NCS-HI-1D, CS-1A, CS-1B, CS-HI-1A, CS-HI-1B

### General Information

Serum of the Newborn Calf category is obtained from 3 to 10 day old calves. In comparison, Calf Serum is obtained from animals which are not more than 12 months old.

Newborn Calf Serum and Calf Serum contain more immunoglobulins than Fetal Bovine Serum and have increased protein content. They are a cost-effective alternative to Fetal Bovine Serum.

Newborn Calf Serum, Heat Inactivated has undergone heat inactivation, which involves heating the serum in a shaking water bath at exactly +56°C for 30 minutes. This treatment inactivates the complement system, antibodies, and other active enzymes.

Product	Volume	Cat. No.
Newborn Calf Serum	100 ml	NCS-1A
	500 ml	NCS-1B
	1000 ml	NCS-1D
Newborn Calf Serum, Heat Inactivated	100 ml	NCS-HI-1B
	500 ml	NCS-HI-1A
	1000 ml	NCS-HI-1D
Calf Serum	100 ml	CS-1B
	500 ml	CS-1A
Calf Serum, Heat Inactivated	500 ml	CS-HI-1A
	100 ml	CS-HI-1B

### Product Specifications

Appearance	Clear amber liquid
Storage and shelf life	Store at ≤-15°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°C to +8°C. Swirl gently to homogenize.

For lot specific data (Certificate of Analysis) please refer to our website:

<https://www.capricornscientific.com/en/services/certificate-of-analysis>

### Additional Optional Treatments

#### Heat Inactivation:

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

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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 – 35kGy. 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 doses (>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

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

## Precautions and Disclaimer

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

## Help Needed?

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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](mailto:techservice@capricorn-scientific.com)) or phone (+49 6424 944640).