

# FOETAL BOVINE SERUM AND ALTERNATIVES

## THE COST BENEFIT

For the majority of researchers, a key cost component of operating a cell culture lab is in the materials used. Products like Fetal+™ are worth exploring as cost conscious substitutes for foetal bovine serum.

Last updated: August 2019. Alex Traksel/Shutterstock.com

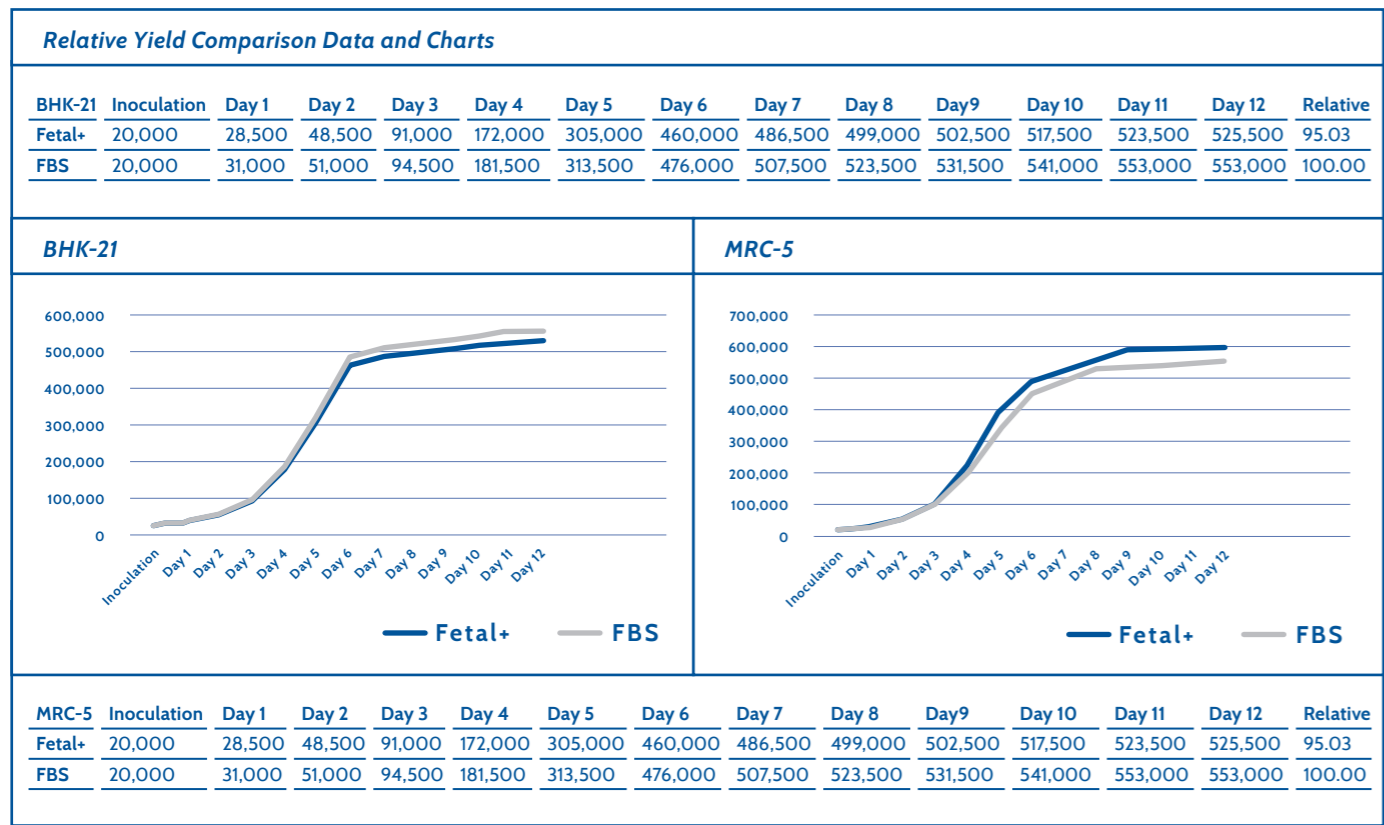


# FOETAL BOVINE SERUM AND ALTERNATIVES

CERTIFIED QUALITY FOR YOUR SUCCESS

Comparing typical critical component concentrations of Fetal+™ and FBS.

PRODUCT	IGG (MG/ML)	TOTAL PROTEIN (G/DL)	IRON (µG/DL)	TRANSFERRIN (MG/DL)	ALBUMIN (G/DL)
Serana Fetal+™	0.1	4.1	190	225	2.2
Serana Foetal Bovine Serum	0.2	3.9	175	190	2.0



Serana's foetal bovine serum is sourced from only the highest quality raw material sources in Australia, the United States, Europe and South America. We have extensive industry experience manufacturing to the highest of standards. Serana maintains an in-house quality control department in order to verify the products adhere to the strictest of quality specifications.

ORDER ONLINE AT  
**SERANA-EUROPE.COM**

OR SEND US AN E-MAIL  
orders@serana-europe.com

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Dorfstrasse 17A  
14641 Pessin, Germany



## FOETAL BOVINE SERUM



### SPECIFICATIONS

#### Foetal Bovine Serum

pH	6.8–8.2
Osmolality	280–340 mOsm/kg
Endotoxin	< 10 EU/ml
Total Protein	3.0–4.5 g/dl
Albumin	1.4–3.4 g/dl
IgG	< 400 µg/ml
Free Haemoglobin	< 25 mg/dl
Mycoplasma	Not detected
Virus & Antibodies	BHV-1, PI-3, BVDV-1,2
Sterility	Tested
Long Term Storage	< -15°C

### TEST SAMPLES, RESERVATIONS AND ORDERS

Many customers prefer to test serum products with their respective cell lines to adhere to their in-house requirements. Serana's distributors will provide samples from different batches for customer testing and will hold the requested numbers of bottles from each batch on reserve until sample tests are completed. Normally, reserves are held for four weeks. Please advise your distributor if longer reservation period are required.

### ADDITIONAL INFORMATION

- Affordable and Quality Assured
- Triple 0.1 µm sterile filtered
- Extensive certificate of analysis provided

### ORDERING INFORMATION

We also offer specially processed foetal bovine serum, including: Gamma irradiated, Charcoal stripped, Heat Inactivated, Dialysed, and Ultra Low IgG

PRODUCT	ORIGIN	VOLUME	STORAGE	SHELF LIFE <sup>1</sup>	CODE
Foetal Bovine Serum Triple 0.1 µm Sterile filtered	Australia	500 ml	< - 15°C	5 Years	S-FBS-AU-015
Foetal Bovine Serum Triple 0.1 µm Sterile filtered	United States	500 ml	< - 15°C	5 Years	S-FBS-US-015
Foetal Bovine Serum Triple 0.1 µm Sterile filtered	Netherlands	500 ml	< - 15°C	5 Years	S-FBS-NL-015
Foetal Bovine Serum Triple 0.1 µm Sterile filtered	South American	500 ml	< - 15°C	5 Years	S-FBS-SA-015

<sup>1</sup> Shelf Life from DOM

## FOETAL BOVINE SERUM ALTERNATIVES

There are a variety of factors that effect the supply of foetal bovine serum including the weather, animal husbandry, and the beef packing industry itself. Regardless of fluctuating quality and occasionally short supply, researchers have relied on foetal bovine serum (FBS) for decades to maintain their cell cultures because it works well. Fortunately, there are abundant, reliable, and less expensive alternatives to FBS.

### FETAL+™

Serana's Fetal+™ product is specifically designed and manufactured as an FBS alternative to provide the nutrients required for cell culture while keeping the cost of cell culture more economical. This product regularly outperforms FBS in growth promotion. Foetal bovine serum is regularly used as a growth supplement in cell culture because it is very nutrient-rich and contains a wide variety of compounds and growth factors that promote good culture conditions.

One of the disadvantages of using FBS is its inconsistent nature. Concentrations of key nutrients change significantly from lot to lot. Serana's Fetal+ has overcome this problem by standardising a proprietary mixture of non-synthetic growth additives with regular FBS. The outcome of this mixture is a lower price while providing a greater supply, being more uniform from lot to lot, and having lower levels of immunoglobulin G.

### SPECIFICATIONS

#### Foetal Bovine Serum Alternatives

Appearance	Clear yellow-amber
pH	6.8–8.2
Osmolality	280–340 mOsm/kg
Endotoxin	< 10 EU/ml
Haemoglobin	< 20 mg/dl
Total Protein	3.0–4.5 g/dl
Albumin	1.4–3.4 g/dl
Globulin	0.4–2.4 g/dl
IgG	< 300 µg/ml
Aerobic Bacteria	Not detected
Anaerobic Bacteria	Not detected
Fungi (Yeast & Mould)	Not detected
Mycoplasma	Not detected
BVDV-1 antibody	Test and report
BVDV-2 antibody	Test and report
PIV3 antibody	Test and report
IBR antibody	Test and report
BLV antibody	Test and report
BHV-1 virus	Test and report
BVDV virus	Test and report
PIV 3 virus	Test and report



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We also offer specially processed foetal bovine serum alternatives, including: Gamma irradiated, Charcoal stripped, Heat Inactivated, Dialysed, and Ultra Low IgG

PRODUCT	ORIGIN	VOLUME	STORAGE	SHELF LIFE <sup>1</sup>	CODE
Fetal+ High Performance Triple 0.1 µm Sterile filtered	EU Eligible	500 ml	< - 15°C	5 Years	S-FBSP-EU-015
Fetal+ High Performance Triple 0.1 µm Sterile filtered	EU Eligible	100 ml	< - 15°C	5 Years	S-FBSP-EU-011
Fetal ExCell Triple 0.1 µm Sterile filtered	EU Eligible	500 ml	< - 15°C	5 Years	S-SFBS-EU-015
Fetal ExCell Triple 0.1 µm Sterile filtered	EU Eligible	100 ml	< - 15°C	5 Years	S-SFBS-EU-011

<sup>1</sup> Shelf Life from DOM