

## Fetal Bovine Serum

*Certificate of Analysis*

Triple 0.1 µm sterile filtered  
Manufactured in Australia

Lot No.: 56070223FBS  
Origin: AUSTRALIA  
Product Code: S-FBS-AU-015, S-FBS-AU-0150  
Date of Manufacture: 07/2023  
Expiry Date: 07/2028  
Storage: < -15°C

### Physical and Chemical Analysis

Test	Method	Specifications	Results	Units
Identity	Internally Validated	Bovine	Bovine	n/a
Appearance	Visual	Clear yellow-amber liquid	Clear yellow-amber liquid	n/a
Specific Gravity	Mass Balance	> 1.01	1.018	g/ml
pH	Electronic pH Meter	6.8 - 8.2	7.14 at 21.5°C	n/a
Osmolality	Osmometer	260 - 340	316	mOsm/kg
Endotoxin	LAL Kinetic	< 10	< 0.5	EU/ml
Hemoglobin	Colorimetric	< 25	6.7	mg/dl

### Protein Profile

Test	Method	Specifications	Results	Units
Total Protein	IDEXX Catalyst One	3.0 - 4.5	3.3	g/dl
Electrophoretic Pattern	Capillary Electrophoresis	Normal	Normal	n/a
Albumin	IDEXX Catalyst One	1.4 - 3.4	1.57	g/dl
Globulin	IDEXX Catalyst One	0.4 - 2.4	1.73	g/dl
Alpha 1	Capillary Electrophoresis	Test and report	1.19	g/dl
Alpha 2	Capillary Electrophoresis	Test and report	0.36	g/dl
Beta	Capillary Electrophoresis	Test and report	0.14	g/dl
Gamma	Capillary Electrophoresis	Test and report	0.03	g/dl
IgG	ELISA	< 500	94.9	µg/ml

### Sterility

Test	Method	Specifications	Results	Units
Sterility	Eur. Ph. 2.6.1	Pass	Pass	n/a
Mycoplasma	qPCR	Not detected	Pass	n/a

### Antibiotics

Test	Method	Specifications	Results	Units
Tetracycline	IDEXX Snap Test	Test and report	Not detected	n/a
Oxytetracycline	IDEXX Snap Test	Test and report	Not detected	n/a
Chlortetracycline	IDEXX Snap Test	Test and report	Not detected	n/a

**CAUTION: THIS PRODUCT IS NOT INTENDED FOR HUMAN OR ANIMAL CONSUMPTION OR THERAPEUTIC USE.**

## Fetal Bovine Serum

*Certificate of Analysis*

Triple 0.1 µm sterile filtered  
Manufactured in Australia

**Lot No.:** 56070223FBS  
**Origin:** AUSTRALIA  
**Product Code:** S-FBS-AU-015, S-FBS-AU-0150  
**Date of Manufacture:** 07/2023  
**Expiry Date:** 07/2028  
**Storage:** < -15°C

### Virus Testing

Test	Method	Specifications	Results	Units
BVDV/BRSV/BHV-1/PI-3 (CPE)	Cell Culture	Not detected	Not detected	n/a
Rabies Virus	qPCR	Not detected	Not detected	n/a
Bluetongue Virus (BTV)	qPCR	Not detected	Not detected	n/a
BRSV	qPCR	Not detected	Not detected	n/a
Reo Virus	qPCR	Not detected	Not detected	n/a
BAV	qPCR	Not detected	Not detected	n/a
BoPV-1, 2	qPCR	Not detected	Not detected	n/a

### Antibody Testing

Test	Method	Specifications	Results	Units
BVDV-1, 2, 3	Detection of Antibodies (ELISA)	Test and report	Not detected	n/a
BHV-1	Detection of Antibodies (ELISA)	Test and report	Not detected	n/a
PI-3	Detection of Antibodies (ELISA)	Test and report	Not detected	n/a

### Biochemistry

Test	Method	Specifications	Results	Units
Aspartate Aminotransferase (AST)	IDEXX Catalyst One	Test and report	39	U/L
Alanine Aminotransferase (ALT)	IDEXX Catalyst One	Test and report	17	U/L
Lactate Dehydrogenase (LDH)	IDEXX Catalyst One	Test and report	1205	U/L
Alkaline Phosphatase (ALKP)	IDEXX Catalyst One	Test and report	184	U/L
Gamma-Glutamyl Trans. (GGT)	IDEXX Catalyst One	Test and report	1	U/L
Cholesterol (CHOL)	IDEXX Catalyst One	Test and report	0.28	mmol/L
Glucose (GLU)	IDEXX Catalyst One	Test and report	2.46	mmol/L
Urea (BUN)	IDEXX Catalyst One	Test and report	5.2	mmol/L
Creatinine (CREA)	IDEXX Catalyst One	Test and report	199	µmol/L
Uric Acid (URIC)	IDEXX Catalyst One	Test and report	125	µmol/L
Calcium (Ca)	IDEXX Catalyst One	Test and report	3.28	mmol/L
Phosphorus (PHOS)	IDEXX Catalyst One	Test and report	2.75	mmol/L
Total Bilirubin (TBIL)	IDEXX Catalyst One	Test and report	1	µmol/L
Magnesium (Mg)	IDEXX Catalyst One	Test and report	1.25	mmol/L
Sodium (Na)	IDEXX Catalyst One	Test and report	142	mmol/L
Potassium (K)	IDEXX Catalyst One	Test and report	>10	mmol/L
Chloride (CL)	IDEXX Catalyst One	Test and report	101	mmol/L
Triglyceride (Trig)	IDEXX Catalyst One	Test and report	0.93	mmol/L
Iron (Fe)	Colorimetric	Test and report	186.8	µg/dl

**CAUTION: THIS PRODUCT IS NOT INTENDED FOR HUMAN OR ANIMAL CONSUMPTION OR THERAPEUTIC USE.**

# Fetal Bovine Serum

*Certificate of Analysis*

Triple 0.1 µm sterile filtered  
Manufactured in Australia

**Lot No.:** 56070223FBS  
**Origin:** AUSTRALIA  
**Product Code:** S-FBS-AU-015, S-FBS-AU-0150  
**Date of Manufacture:** 07/2023  
**Expiry Date:** 07/2028  
**Storage:** < -15°C

## Cell-Culture Test

Cell Line	Method	Specifications	Results
L-929	Morphology	Tested vs. Control Serum <sup>1</sup>	3+/3+
HELA	Morphology	Tested vs. Control Serum <sup>1</sup>	3/3
MRC-5	Morphology	Tested vs. Control Serum <sup>1</sup>	3/3
L-929	Density	Tested vs. Control Serum <sup>2</sup>	3+/3+
HELA	Density	Tested vs. Control Serum <sup>2</sup>	3/3
MRC-5	Density	Tested vs. Control Serum <sup>2</sup>	3-/3-
L-929	Cell Count	Cell count [log <sub>10</sub> /ml]/dead cells [%]	5.62/0 vs. 5.62/0
HELA	Cell Count	Cell count [log <sub>10</sub> /ml]/dead cells [%]	5.48/0 vs. 5.46/0
MRC-5	Cell Count	Cell count [log <sub>10</sub> /ml]/dead cells [%]	5.33/2.27 vs. 5.41/0

Cell Line	Method	Specifications	Results
BHK-21	Cloning Efficiency - Records results vs. control at the 8 <sup>th</sup> day	>75% CE vs. control CE	> 96%

## Scoring System (vs. Control Serum):

- <sup>1</sup> 0 cells dead; 1 many degenerated cells, plenty of dead cells; 2 cells partially degenerated; many dead cells; 3 few degenerated cells, some dead cells; 4 all cells ok.
- <sup>2</sup> 0 single cells/small colonies; 1 <50% confluent; 2 50 – 90% confluent; 3 confluent; 4 more than confluent

## Interpretation:

The cell growth using test serum Lot: 56070123FBS was comparable to the internal standard serum. The viability of the cells before trypsinization was similar. Using the test serum all cells displayed good viability and cell growth.

This document was produced electronically and is valid without a signature.

**CAUTION: THIS PRODUCT IS NOT INTENDED FOR HUMAN OR ANIMAL CONSUMPTION OR THERAPEUTIC USE.**