



CERTIFICATE OF ANALYSIS
GemCell™ Fetal Bovine Serum
(Catalog Number 100-500)

Lot Number: A121032

Date of Manufacture: DEC2021

Product Expiry: DEC2026

Origin: United States

Storage Temperature: ≤ -10°C

For Cell culture, Further Manufacturing or Research use Only. Not for Direct Therapeutic Use

Product description: Gemcell™ Fetal Bovine Serum is sterile-filtered through a 0.1 µm filter prior to freezing.

Test	Methodology	Specification	Analysis
Biological Testing			
Endotoxin	USP<85>, EP 2.6.14	<10.0 EU/mL	0.267 EU/mL
Hemoglobin	Fleming, AF and Woolf, AJ (1965)	<20.0 mg/dL	12.42 mg/dL
Microbiological Testing			
Sterility	USP<71>, EP 2.6.1		
Bacteria		No Growth	No Growth
Fungi		No Growth	No Growth
Mycoplasma	Barile, MF and Kern, J (1971), EP 2.6.7/PCR	Not Detected	Not Detected
Viral Testing			
	9CFR 113.53c[113.46, 113.47]		
Cytopathic Agents		Not Detected	Not Detected
Hemadsorbing Agents		Not Detected	Not Detected
Extraneous Viruses (FAb)			
Bluetongue Virus		Not Detected	Not Detected
Bovine Adenovirus		Not Detected	Not Detected
Bovine Parvovirus		Not Detected	Not Detected
Bovine Viral Diarrhea(cytopathic)		Not Detected	Not Detected
Bovine Syncytial Virus		Not Detected	Not Detected
Bovine Rabies Virus		Not Detected	Not Detected
Reovirus		Not Detected	Not Detected



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Test	Methodology	Specification	Analysis
Physical Testing			
Electrophoretic Pattern	Cellulose Acetate	Normal	Normal
Osmolality	USP<785>, EP 2.2.35	260 – 350 mOsm/ kg	312 mOsm/kg
pH	USP<791>	6.5 – 8.5	7.1
Biochemistry			
Albumin		Test and Report	1.6 g/dL
Alkaline Phosphatase		Test and Report	257 IU/L
ALT (SGPT)		Test and Report	13 IU/L
AST (SGOT)		Test and Report	55 IU/L
GGT		<10 U/L	3.0 IU/L
Bilirubin, Total		Test and Report	0.1 mg/dL
BUN		Test and Report	14.0 mg/dL
Calcium		Test and Report	14.2 mg/dL
Chloride		Test and Report	96.0 mEq/L
Cholesterol		Test and Report	30.0 mg/dL
Cortisol		Test and Report	0.200 µg/dL
Creatinine		Test and Report	2.7 mg/dL
Glucose		Test and Report	131.0 mg/dL
IgG	ELISA	<0.300 mg/mL*	0.098 mg/mL
Insulin		Test and Report	8.12 µIU/mL
Iron, Serum		Test and Report	174.0 µg/dL
Phosphorus		Test and Report	10.1 mg/dL
Potassium		Test and Report	12.4 mEq/L
Progesterone		Test and Report	<0.06 ng/mL
Protein, Total	Biuret	2.5 – 6.0 g/dL	3.7 g/dL
Sodium		Test and Report	136.0 mEq/L
Testosterone		Test and Report	<0.01 ng/mL
T3		Test and Report	203.0 ng/dL
T4		Test and Report	12.2 µg/dL
Triglycerides		Test and Report	71.0 mg/dL
Tetracycline		<4 ng/mL	1.40 ng/mL
Uric Acid		Test and Report	2.6 mg/dL



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Our fetal bovine serum meets all USDA requirements and has passed ante and post-mortem inspection by a licensed veterinarian. It is collected in countries recognized as being free of foot-and-mouth disease and rinderpest. The origin of all fetal bovine serum is traceable by lot number, date and country of collection. Precipitates may develop in this product upon freezing and/or thawing; this occurrence does not impact culture performance. *Some geographic regions may test higher than 0.300 mg/mL. If this be the case, refer to GGT results less than 10 U/L to ensure FBS purity.

The testing that has been performed as part of this lot release has been reviewed by Quality Assurance personnel and has confirmed that the testing meets the specifications presented on this Certificate of Analysis.

Hinnia Z Khan

Name

15MAR2022

Date

QC Associate I

Title