



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

Lot Number: A121060

Date of Manufacture: NOV2021

Product Expiry: NOV2026

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
<b>Biological Testing</b>			
Endotoxin	LAL	<10.0 EU/mL	0.589EU/mL
Hemoglobin	USP<90>	<20.0 mg/dL	12.71 mg/dL
<b>Microbiological Testing</b>			
Sterility	9CFR 113.26		
Bacteria		No Growth	No Growth
Fungi		No Growth	No Growth
Mycoplasma	PCR	Not Detected	Not Detected
<b>Viral Testing</b>			
	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 Respiratory Syncytial Virus		Not Detected	Not Detected
Rabies Virus		Not Detected	Not Detected
Reovirus		Not Detected	Not Detected
<b>Physical Testing</b>			
Electrophoretic Pattern		Normal	Normal
Osmolality		260 – 350 mOsm/ kg	309.0 mOsm/kg
pH		6.5 – 8.5	7.2
<b>Biochemistry</b>			
Albumin		Test and Report	1.5 g/dL
Alkaline Phosphatase		Test and Report	254 IU/L
ALT (SGPT)		Test and Report	11 IU/L
AST (SGOT)		Test and Report	57 IU/L
GGT		<10 U/L	4.0 U/L



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Bilirubin, Total		Test and Report	0.2 mg/dL
BUN		Test and Report	13.0 mg/dL
Calcium		Test and Report	13.9 mg/dL
Chloride		Test and Report	96.0 mEq/L
Cholesterol		Test and Report	29.0 mg/dL
Cortisol		Test and Report	<0.20 µg/dL
Creatinine		Test and Report	2.6 mg/dL
Glucose		Test and Report	128.0 mg/dL
IgG	ELISA	<0.300 mg/mL*	0.1134 mg/mL
Insulin		Test and Report	9.42 uIU/mL
Iron, Serum		Test and Report	169.0 µg/dL
Phosphorus		Test and Report	10.0 mg/dL
Potassium		Test and Report	13.0 mEq/L
Progesterone		Test and Report	<0.06 ng/mL
Protein, Total		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	171.0 ng/dL
T4		Test and Report	11.6 µg/dL
Triglycerides		Test and Report	70.0 mg/dL
Tetracycline		<4 ng/mL	2.60 ng/mL
Uric Acid		Test and Report	2.6 mg/dL

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.

Julie Wilson  
Name

QA Specialist  
Title

14 FEB 2023  
Date