



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

Lot Number: A122064

Date of Manufacture: MAR2022

Product Expiry: MAR2027

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	LAL	<10.0 EU/mL	1.230 EU/mL
Hemoglobin	USP<90>	<20.0 mg/dL	15.80 mg/dL
Microbiological Testing			
Sterility	9CFR 113.26		
Bacteria		No Growth	No Growth
Fungi		No Growth	No Growth
Mycoplasma	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 Respiratory Syncytial Virus		Not Detected	Not Detected
Rabies Virus		Not Detected	Not Detected
Reovirus		Not Detected	Not Detected
Physical Testing			
Electrophoretic Pattern		Normal	Normal
Osmolality	Osmometer	260 – 350 mOsm/ kg	310.0 mOsm/kg
pH	pH meter	6.5 – 8.5	7.2
Biochemistry			
Albumin		Test and Report	1.6 g/dL
Alkaline Phosphatase	Chemistry Analyzer	Test and Report	285 IU/L
ALT (SGPT)	Chemistry Analyzer	Test and Report	13 IU/L
AST (SGOT)	Chemistry Analyzer	Test and Report	54 IU/L
GGT	Chemistry Analyzer	<10 U/L	3.0 IU/L



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Bilirubin, Total	Chemistry Analyzer	Test and Report	0.2 mg/dL
BUN	Chemistry Analyzer	Test and Report	15.0 mg/dL
Calcium	Chemistry Analyzer	Test and Report	14.2 mg/dL
Chloride	Chemistry Analyzer	Test and Report	96.0 mEq/L
Cholesterol	Chemistry Analyzer	Test and Report	31.0 mg/dL
Cortisol		Test and Report	<0.2 µg/dL
Creatinine	Chemistry Analyzer	Test and Report	2.8 mg/dL
Glucose	Chemistry Analyzer	Test and Report	117.0 mg/dL
IgG	ELISA	<0.300 mg/mL*	0.1406 mg/mL
Insulin		Test and Report	4.9 uIU/mL
Iron, Serum	Chemistry Analyzer	Test and Report	181.0 µg/dL
Phosphorus	Chemistry Analyzer	Test and Report	9.6 mg/dL
Potassium	Chemistry Analyzer	Test and Report	11.7 mEq/L
Progesterone		Test and Report	<0.06 ng/mL
Protein, Total	Chemistry Analyzer	2.5 – 6.0 g/dL	3.8 g/dL
Sodium	Chemistry Analyzer	Test and Report	137.0 mEq/L
Testosterone		Test and Report	<0.01 ng/mL
T3		Test and Report	135.0 ng/dL
T4		Test and Report	13.4 µg/dL
Triglycerides	Chemistry Analyzer	Test and Report	60.0 mg/dL
Uric Acid	Chemistry Analyzer	Test and Report	2.4 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.

Jeaneline Wilson
 Name
QA Specialist
 Title

21 MAR 2023
 Date