



CERTIFICATE OF ANALYSIS
BenchMark™ Fetal Bovine Serum
(Catalog Number 100-106)

Lot Number: A123000

Date of Manufacture: MAY2022

Product Expiry: MAY2027

Origin: Nicaragua

Storage Temperature: ≤ -10°C

For Cell Culture, further Manufacturing or Research use only. Not for direct Therapeutic use.

Product description: BenchMark™ 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	<0.1 EU/mL
Hemoglobin	USP <90>	<20.0 mg/dL	9.20 mg/dL
Microbiological Testing			
Sterility	USP <71>, EP 2.6.1		
Bacteria		No Growth	No Growth
Fungi		No Growth	No Growth
Mycoplasma	Barile and Kern & Hoechst Fluorochrome Stain	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	Cellulose Acetate Electrophoresis	Normal	Normal
Osmolality	USP <785>, EP 2.2.35	260 – 350 mOsm/kg	286 mOsm/kg
pH	USP <791>, EP 2.2.3	6.5 – 8.5	7.3
Biochemistry			
Albumin		Test and Report	2.2 g/dL
Alkaline Phosphatase		Test and Report	327 IU/L
ALT (SGPT)		Test and Report	6 IU/L
AST (SGOT)		Test and Report	35 IU/L



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GGT	Chemistry Analyzer	<10 U/L	5 IU/L		
Bilirubin, Total		Test and Report	0.2 mg/dL		
BUN		Test and Report	19 mg/dL		
Calcium		Test and Report	13.4 mg/dL		
Chloride		Test and Report	99 mmol/L		
Cholesterol		Test and Report	28 mg/dL		
Cortisol		Test and Report	<0.20 µg/dL		
Creatinine		Test and Report	3.0 mg/dL		
Glucose		Test and Report	46 mg/dL		
IgG		ELISA	<0.300 mg/mL*	0.0974 mg/mL	
Insulin			Test and Report	6.88 µIU/mL	
Iron, Serum			Test and Report	166 µg/dL	
Phosphorus			Test and Report	8.1 mg/dL	
Potassium			Test and Report	10.4 mmol/L	
Progesterone			Test and Report	<0.1 ng/mL	
Protein, Total			USP <1057>, EP 2.5.33	2.5 – 6.0 g/dL	3.7 g/dL
Sodium				Test and Report	137 mmol/L
Testosterone	Test and Report			<0.01 ng/mL	
T3	Test and Report			71.3 ng/dL	
T4	Test and Report	19.0 µg/dL			
Triglycerides	Test and Report	49 mg/dL			
Uric Acid	Test and Report	1.3 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.

Karen Zuniga
 Name
07MAR2023
 Date

QA Associate I
 Title