



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

Lot Number: A423019

**Date of Manufacture:** Feb2023

**Product Expiry:** Feb2028

**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
<b>Biological Testing</b>			
Endotoxin	LAL	<10.0 EU/mL	<0.200 EU/mL
Hemoglobin	USP <90>	<20.0 mg/dL	14.45 mg/dL
<b>Microbiological Testing</b>			
Sterility			
Bacteria	9CFR 113.26	No Growth	No Growth
Fungi	9CFR 113.26	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	Osmometer	260 – 350 mOsm/ kg	304.0 mOsm/kg
pH	pH Meter	6.5 – 8.5	7.3
<b>Biochemistry</b>			
Albumin		Test and Report	1.7 g/dL
Alkaline Phosphatase	Chemistry Analyzer	Test and Report	336 IU/L
ALT (SGPT)	Chemistry Analyzer	Test and Report	8 IU/L
AST (SGOT)	Chemistry Analyzer	Test and Report	51 IU/L
GGT	Chemistry Analyzer	<10 U/L	4.0 IU/L



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Bilirubin, Total	Chemical Analyzer	Test and Report	0.2 mg/dL
BUN	Chemical Analyzer	Test and Report	19.0 mg/dL
Calcium	Chemical Analyzer	Test and Report	13.7 mg/dL
Chloride	Chemical Analyzer	Test and Report	98.0 mEq/L
Cholesterol	Chemical Analyzer	Test and Report	33.0 mg/dL
Cortisol		Test and Report	<0.2 µg/dL
Creatinine	Chemical Analyzer	Test and Report	2.6 mg/dL
Glucose	Chemical Analyzer	Test and Report	42.0 mg/dL
IgG	ELISA	<0.300 mg/mL*	0.1276 mg/mL
Insulin		Test and Report	4.390 uIU/mL
Iron, Serum	Chemical Analyzer	Test and Report	164.0 µg/dL
Phosphorus	Chemical Analyzer	Test and Report	8.3 mg/dL
Potassium	Chemical Analyzer	Test and Report	10.7 mEq/L
Progesterone		Test and Report	<0.06 ng/mL
Protein, Total	Chemical Analyzer	2.5 – 6.0 g/dL	3.6 g/dL
Sodium	Chemical Analyzer	Test and Report	138.0 mEq/L
Testosterone		Test and Report	<0.01 ng/mL
T3		Test and Report	59.1 ng/dL
T4		Test and Report	16.3 µg/dL
Triglycerides	Chemical Analyzer	Test and Report	49.0 mg/dL
Uric Acid	Chemical Analyzer	Test and Report	1.0 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.

Korrina Nicewonger  
Name

29 AUG 2023  
Date

QC Associate II  
Title