



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

Lot Number: A423020

Date of Manufacture: JUN2023

Product Expiry: JUN2028

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	LAL	<10.0 EU/mL	<0.202 EU/mL
Hemoglobin	USP <90>	<20.0 mg/dL	13.79 mg/dL
Microbiological Testing			
Sterility			
Bacteria	9CFR 113.26	No Growth	No Growth
Fungi	9CFR 113.26	No Growth	No Growth
Mycoplasma		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	7.3
Biochemistry			
Albumin		Test and Report	1.8 g/dL
Alkaline Phosphatase	Chemistry Analyzer	Test and Report	358 IU/L
ALT (SGPT)	Chemistry Analyzer	Test and Report	9 IU/L
AST (SGOT)	Chemistry Analyzer	Test and Report	42 IU/L
GGT	Chemistry Analyzer	<10 U/L	4.0 IU/L



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Bilirubin, Total	Chemistry Analyzer	Test and Report	0.1 mg/dL
BUN	Chemistry Analyzer	Test and Report	19.0 mg/dL
Calcium	Chemistry Analyzer	Test and Report	13.9 mg/dL
Chloride	Chemistry Analyzer	Test and Report	96.0 mEq/L
Cholesterol	Chemistry Analyzer	Test and Report	29.0 mg/dL
Cortisol		Test and Report	<0.2 µg/dL
Creatinine	Chemistry Analyzer	Test and Report	2.9 mg/dL
Glucose	Chemistry Analyzer	Test and Report	51.0 mg/dL
IgG	ELISA	<0.300 mg/mL*	0.1625 mg/mL
Insulin		Test and Report	7.130 uIU/mL
Iron, Serum	Chemistry Analyzer	Test and Report	161.0 µg/dL
Phosphorus	Chemistry Analyzer	Test and Report	8.3 mg/dL
Potassium	Chemistry Analyzer	Test and Report	10.2 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	136.0 mEq/L
Testosterone		Test and Report	<0.01 ng/mL
T3		Test and Report	65.8 ng/dL
T4		Test and Report	13.9 µg/dL
Triglycerides	Chemistry Analyzer	Test and Report	43.0 mg/dL
Uric Acid	Chemistry 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.

VANESSA YOUNG
Name

22 SEP 2023
Date

QA ASSOCIATE II
Title