



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

Lot Number: A424006

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 | 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 | 7.3 |
| 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.

Korrina Nicewonger
Name

07 FEB 2024
Date

QC Associate II
Title