



Product: **GemCell™ Fetal Bovine Serum**
Heat Inactivated
Triple 0.1µm sterile-filtered

Catalog #: 100-500

Lot #: A22H02K

Origin: United States (100%)

Manufacture Date: Oct 2019

Expiration Date: Oct 2024

| TEST | METHODOLOGY | SPECIFICATION | RESULTS |
|--|----------------------------------|-----------------|--------------|
| Biological Testing | | | |
| Endotoxin | USP<85> | <10.0 EU/mL | <0.1 EU/mL |
| Hemoglobin | Fleming, AF and Woolf, AJ (1965) | <20.0 mg/dL | 9.25 mg/dL |
| Microbiological Testing | | | |
| Sterility | USP<71> | | |
| Bacteria | | Not Detected | Not Detected |
| Fungi | | Not Detected | Not Detected |
| Mycoplasma | Barile, MF and Kern, J (1971) | Not Detected | Not Detected |
| Viral Testing | | | |
| | 9 CFR 113.53c [113.46, 113.47] | | |
| Cytopathic Agents | | Not Detected | Not Detected |
| Hemadsorbing Agents | | Not Detected | Not Detected |
| Bovine Viral Diarrhea Ab Titer | | | |
| Type I | | Test and Report | 1:1 |
| Type II | | Test and Report | 1:1 |
| 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 Viral Diarrhea (non-cytopathic) | | Test and Report | Not Detected |
| Bovine Syncytial Virus | | Not Detected | Not Detected |
| Bovine Rabies Virus | | Not Detected | Not Detected |
| Reovirus | | Not Detected | Not Detected |
| Physical Testing | | | |
| Electrophoretic Pattern | Cellulose Acetate | Normal | Normal |
| Osmolality | USP<785> | 260-350 mOsm/kg | 293 mOsm/kg |
| pH @ RT | USP<791> | 6.5 – 8.5 | 7.32 |



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|----------------------|-------------|-----------------|-------------|
| Albumin | | Test and Report | 2.0 g/dL |
| Alkaline Phosphatase | | Test and Report | 207 U/L |
| ALT (SGPT) | | Test and Report | 6 U/L |
| AST (SGOT) | | Test and Report | 53 U/L |
| GGT | | <10 U/L | 5 IU/L |
| Bilirubin, Total | | Test and Report | 0.2 mg/dL |
| BUN | | Test and Report | 14 mg/dL |
| Calcium | | Test and Report | 3.3 mM |
| Chloride | | Test and Report | 98 mM |
| Cholesterol | | Test and Report | 29 mg/dL |
| Cortisol | | Test and Report | 9.1 nM |
| Creatinine | | Test and Report | 2.6 mg/dL |
| Estradiol | | Test and Report | 142 pM |
| Glucose | | Test and Report | 6.3 mM |
| IgG | ELISA | <0.300 mg/mL* | 0.118 mg/mL |
| Insulin | | Test and Report | 22.9 pM |
| Iron, Serum | | Test and Report | 192 ug/dL |
| Phosphorus | | Test and Report | 3.1 mM |
| Potassium | | Test and Report | >10.0 mM |
| Progesterone | | Test and Report | <0.3 nM |
| Protein, Total | Biuret | 2.5-6.0 g/dL | 3.5 g/dL |
| Sodium | | Test and Report | 137 mM |
| Testosterone | | Test and Report | <0.03 nM |
| T3 | | Test and Report | 1.53 nM |
| T4 | | Test and Report | 206 nM |
| Triglycerides | | Test and Report | 61 mg/dL |
| Tetracycline | | <4 ng/mL | Pass |
| Uric Acid | | Test and Report | 2.7 mg/dL |

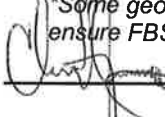
For Cell Culture, further Manufacturing and Research use only. Not for direct Therapeutic use.

Results shown were obtained by carefully performed methods believed to be reliable. However, since some results may vary by methodology, it is suggested that tests for which results are particularly critical be repeated by the end user.

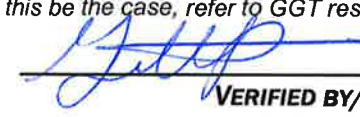
Our fetal bovine serum meets all USDA requirements and has passed ante- and post-mortem inspection by a licensed veterinarian. It is collected in countries recognized as being free of foot-and-mouth disease and rinderpest. The origin of all fetal bovine serum is traceable by lot number, date and country 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.*

 12 AUG 2020

CREATED BY/ DATE

 12 AUG 2020

VERIFIED BY/ DATE