



# Certificate of Analysis

Created April 1, 2016

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

**Catalog #: 900-108**  
**Lot #: A30F01G**  
**Origin: New Zealand**

**Manufacture Date: Dec 2015**  
**Expiration Date: Dec 2020**

| TEST                               | METHODOLOGY                      | SPECIFICATION   | RESULTS      |
|------------------------------------|----------------------------------|-----------------|--------------|
| <b>Biological Testing</b>          |                                  |                 |              |
| Endotoxin                          | USP<85>                          | <50.0 EU/mL     | <37.5 EU/mL  |
| Hemoglobin                         | Fleming, AF and Woolf, AJ (1965) | <40.0 mg/dL     | 2.5 mg/dL    |
| <b>Microbiological Testing</b>     |                                  |                 |              |
| Sterility                          | USP<71>                          |                 |              |
| Bacteria                           |                                  | Not Detected    | Not Detected |
| Fungi                              |                                  | Not Detected    | Not Detected |
| Mycoplasma                         | Barile, MF and Kern, J (1971)    | Not Detected    | Not Detected |
| <b>Viral Testing</b>               |                                  |                 |              |
|                                    | 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                             |                                  |                 | 1:8          |
| Type II                            |                                  |                 | 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 Syncytial Virus             |                                  | Not Detected    | Not Detected |
| Bovine Rabies Virus                |                                  | Not Detected    | Not Detected |
| Reovirus                           |                                  | Not Detected    | Not Detected |
| <b>Physical Testing</b>            |                                  |                 |              |
| Electrophoretic Pattern            | Cellulose Acetate                | Normal          | Normal       |
| Osmolality                         | USP<785>                         | 260-350 mOsm/kg | 299 mOsm/kg  |
| pH @ RT                            | USP<791>                         | 6.5 – 8.5       | 7.0          |



**GEMINI**  
BIO-PRODUCTS

# Biochemical Testing

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|----------------------|-------------|---------------|------------|
| Albumin              |             |               | 2.2 g/dL   |
| Alkaline Phosphatase |             |               | 164 U/L    |
| ALT (SGPT)           |             |               | 8 U/L      |
| AST (SGOT)           |             |               | 74 U/L     |
| Bilirubin, Total     |             |               | <0.1 mg/dL |
| BUN                  |             |               | 7 mg/dL    |
| Calcium              |             |               | 2.88 mM    |
| Chloride             |             |               | 107 mM     |
| Cholesterol          |             |               | <50 mg/dL  |
| Cortisol             |             |               | 9.08 nM    |
| Creatinine           |             |               | 1.8 mg/dL  |
| Estrogen             |             |               | 168.9 pM   |
| Glucose              |             |               | 3.89 mM    |
| IgG                  | ELISA       |               | 0.09 mg/mL |
| Insulin              |             |               | <11.2 pM   |
| Iron, Serum          |             |               | 229 ug/dL  |
| Phosphorus           |             |               | 7.75 mM    |
| Potassium            |             |               | 10.4 mM    |
| Progesterone         |             |               | <0.16 nM   |
| Protein, Total       | Biuret      | 2.5-6.0 g/dL  | 3.9 g/dL   |
| Sodium               |             |               | 140 mM     |
| Testosterone         |             |               | <0.03 nM   |
| T3                   |             |               | 2.79 nM    |
| T4                   |             |               | 177.6 nM   |
| Triglycerides        |             |               | 47 mg/dL   |
| Tetracycline         |             |               | <4 ng/mL   |
| Uric Acid            |             |               | 0.0 mg/dL  |

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. Heat inactivated at 56°C for 30 minutes.