



**GEMINI**  
BIO-PRODUCTS

# Certificate of Analysis

Created January 22, 2020

**Product:**

**No Worries™ Fetal Bovine Serum**  
Triple 0.1µm sterile-filtered

**Catalog #: 100-700**

**Lot #: A20H82K**

**Origin: New Zealand**

**Manufacture Date: Apr 2019**

**Expiration Date: Apr 2024**

TEST	METHODOLOGY	SPECIFICATION	RESULTS
<b>Biological Testing</b>			
Endotoxin	USP<85>	<10.0 EU/mL	<0.1 EU/mL
Hemoglobin	Fleming, AF and Woolf, AJ (1965)	<20.0 mg/dL	9.03 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		Not Detected	Not Detected
<b>Physical Testing</b>			
Electrophoretic Pattern	Cellulose Acetate	Normal	Normal
Osmolality	USP<785>	260-350 mOsm/kg	303 mOsm/kg
pH @ RT	USP<791>	6.5 - 8.5	7.17



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# Biochemical Testing

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TEST	METHODOLOGY	SPECIFICATION	RESULTS
Albumin		Test and Report	2.1 g/dL
Alkaline Phosphatase		Test and Report	155 U/L
ALT (SGPT)		Test and Report	4 U/L
AST (SGOT)		Test and Report	36 U/L
GGT		<10 U/L	5
Bilirubin, Total		Test and Report	0.2 mg/dL
BUN		Test and Report	17 mg/dL
Calcium		Test and Report	3.05 mM
Chloride		Test and Report	96 mM
Cholesterol		Test and Report	31 mg/dL
Creatinine		Test and Report	1.8 mg/dL
Glucose		Test and Report	3.3 mM
IgG	ELISA	<0.300 mg/mL*	0.025 mg/mL
Iron, Serum		Test and Report	223 ug/dL
Phosphorus		Test and Report	3.2 mM
Potassium		Test and Report	>10.0 mM
Protein, Total	Biuret	2.5-6.0 g/dL	3.2 g/dL
Sodium		Test and Report	133 mM
Uric Acid		Test and Report	1.4 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.*

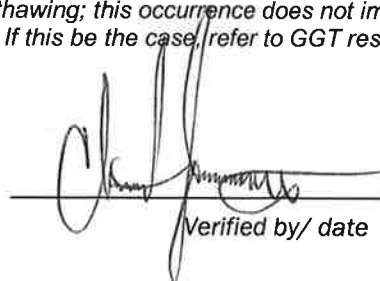
*Our fetal bovine serum meets all USDA requirements and has passed ante- and post-mortem inspection by a licensed veterinarian. It is collected in countries recognized as being free of foot-and-mouth disease and rinderpest. The origin of all fetal bovine serum is traceable by lot number, date and country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

 22 JAN 2020

Created by/ date

 22 JAN 2020

Verified by/ date