



Certificate of Analysis

Updated September 28, 2016

Product: **BenchMark™ Fetal Bovine Serum**
Triple 0.1µm sterile-filtered

Catalog #: 100-106

Lot #: A51F00H

Origin: Costa Rica (100%)

Manufacture Date: July 2016

Expiration Date: July 2021

TEST	METHODOLOGY	SPECIFICATION	RESULTS
Biological Testing			
Endotoxin	USP<85>	<10.0 EU/mL	<1.00 EU/mL
Hemoglobin	Fleming, AF and Woolf, AJ (1965)	<20.0 mg/dL	14.88 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			1:1
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 Viral Diarrhea (non-cytopathic)		Not Detected	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	Pending
Osmolality	USP<785>	260-350 mOsm/kg	307 mOsm/kg
pH @ RT	USP<791>	6.5 - 8.5	6.90

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Albumin			2.4 g/dL
Alkaline Phosphatase			290.0 U/L
ALT (SGPT)			6.0 U/L
AST (SGOT)			26.0 U/L
Bilirubin, Total			0.2 mg/dL
BUN			17.0 mg/dL
Calcium			3.475 mM
Chloride			98.0 mM
Cholesterol			0.75 mg/dL
Cortisol			<5.52 nM
Creatinine			2.9 mg/dL
Estrogen			72.69 pM
Glucose			3.11 mM
IgG	ELISA		0.124 mg/mL
Insulin			75.35 pM
Iron, Serum			175 ug/dL
Phosphorus			2.75 mM
Potassium			9.7 mM
Progesterone			0.16 nM
Protein, Total	Biuret	2.5-6.0 g/dL	3.7 g/dL
Sodium			138 mM
Testosterone			<0.035 nM
T3			1.42 nM
T4			226.51 nM
Triglycerides			58.0 mg/dL
Tetracycline			<1 ng/mL
Uric Acid			1.6 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.