

Tissue Culture Biologicals, Inc.

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CERTIFICATE OF ANALYSIS

FETAL BOVINE SERUM	Country of Origin:
0.1 micron Aseptically Filtered	
Catalog # 101	Date Manufactured:
Lot #	Storage: ≤ -20°C

Fetal Bovine Serum is collected in USDA inspected facilities and processed by Tissue Culture Biologicals in compliance with current Good Manufacturing Practices.

Appearance: Clear, amber to reddish amber colored fluid.

Sterility: No evidence of bacterial or fungal contamination after 14 days testing on fluid thioglycollate and soybean-casein digest media according to CFR title 9 part 113.26 and the U.S. Pharmacopeia <71>.

TEST	RANGE/UNITS	RESULT
Hemoglobin	Less than 25 mg/dl (mg%)	
pH at 25°C	6.7 – 8.1	
Osmolality	260 – 330 mOsmoles/Kg water	
Total protein	3.0 – 4.5 g/dL	
Gamma globulin	Less than 10% of the total protein	
Endotoxin	Less than 10 EU/ml (LAL gel clot)	

Biochemical Analysis:

TEST	RESULTS	RANGE/UNITS	TEST	RESULTS	RANGE/UNITS
Alkaline phosphatase		<700 IU/L	Calcium		9 – 15 mg/dL
ALT (SGPT)		<10 IU/L	Phosphorus		5 – 15 mg/dL
AST (SGOT)		<50 IU/L	Chloride		90 – 110 mMol/L
GGT		<10 IU/L	Potassium		8 – 20 mMol/L
Total Bilirubin		<0.1 – 1.0 mg/dL	Sodium		125 – 150 mMol/L
BUN		10 – 25 mg/dL	Uric acid		0.5 – 4.0 mg/dL
Creatinine		1.6 – 4.3 mg/dL	Triglycerides		<100 mg/dL
Cholesterol		10 – 60 mg/dL	Serum Iron		100 – 300 µg/dL
Lactate dehydrogenase		<1000 IU/L	Glucose		30 – 150 mg/dL

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Mycoplasma: None detected by the indirect DNA bisbenzimidazole fluorescent staining method described in 'Mycoplasma Infection of Cell Cultures' G.J. McGarrity, D.G. Murphy and W.W. Nichols, eds., New York Plenum Press, 1978 and by J.R. Chen, Exp. Cell Res. 1977, 104:205.

Adventitious Viral Agents: Eleven day Quicktest

Cytopathic effects (CPE)	Non Detected
Bovine Viral Diarrhea Virus (BVD)	Non Detected
Infectious Bovine Rhinotracheitis Virus (IBR)	Non Detected
Parainfluenza Virus Type 3 (PI 3)	Non Detected

Antibody Serum Neutralization Titer:

BVD	Reported
IBR	Reported
PI 3	Reported

Electrophoretic Profile:

Total Protein	3.0 – 4.5 g/dL	Gamma globulin:	<0.4 g/dL
Albumin	1.4 – 3.4 g/dL	A/G Ratio:	Reported

Growth Promotion: Shows the ability of the serum to support the growth of a cell line using a standardized inoculum, in a minimal medium supplemented with 10% serum. After three (3) passages the ratio of cell yield (harvest) to cells inoculated (plant) is calculated.

Cell Line:

Passage 3, population doubling: _____ Relative Plating Efficiency: %

Signed by: _____ Date: _____ Reviewed by: _____ Date: _____