



CERTIFICATE OF ANALYSIS
GemCell™ Bovine Calf Serum
(Catalog Number 100-506)

Lot Number: C39J74J **Date of Manufacture:** Nov2018
Origin: United States **Product Expiry:** Nov2023

For Cell culture, Further Manufacturing or Research use Only. Not for Direct Therapeutic Use.

Storage Temperature: ≤ -10°C

Product description: GemCell™ Bovine Calf Serum is sterile-filtered through a 0.2 µm filter prior to freezing.

Test	Methodology	Specification	Analysis
Biological Testing			
Endotoxin	USP<85>	Test and Report	< 1.0 EU/mL
Microbiological Testing			
Sterility	USP<71>		
Bacteria		No Growth	No Growth
Fungi		No Growth	No Growth
Mycoplasma	Barile, MF and Kern, J (1971)	Not Detected	Not Detected
Viral Testing			
	9CFR BVB, PI-3, IBR and BT only		
Bovine Viral Diarrhea		Not detected	Not detected
IBR		Not Detected	Not Detected
Para Influenza 3 Virus (PI3)		Not Detected	Not Detected
BTV		Not Detected	Not Detected
Physical Testing			
Osmolality	USP <785>	Test and Report	293 mOsm/Kg
pH	USP<791>	Test and Report	7.7
Biochemistry			
Albumin		Test and Report	2.4 g/dL
Alkaline Phosphatase		Test and Report	113 U/L
ALT (SGPT)		Test and Report	7 U/L
AST (SGOT)		Test and Report	38 U/L
Bilirubin, Total		Test and Report	0.1 mg/dL
BUN		Test and Report	6 mg/dL
Calcium		Test and Report	7.0 mg/dL
Chloride		Test and Report	72 mmol/L
Cholesterol		Test and Report	62 mg/dL
Creatinine		Test and Report	0.5 mg/dL
Glucose		Test and Report	48 mg/dL



Test	Methodology	Specification	Analysis
Hemoglobin	Fleming, AF and Woolf, AJ(1965)	Test and Report	6.7 mg/dL
Iron, Serum		Test and Report	59 ug/dL
Phosphorus		Test and Report	6.4 mg/dL
Potassium		Test and Report	4.3 mmol/L
Protein, Total		Test and Report	4.9 g/dL
Sodium		Test and Report	105 mmol/L
Triglycerides		Test and Report	11 mg/dL
Uric Acid		Test and Report	0.8 mg/dL

Our 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 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.

The testing that has been performed as part of this lot release has been reviewed by Quality Assurance personnel and has confirmed that the testing meets the specifications presented on this Certificate of Analysis.

Megha Khutasi

Name

QA Associate III

Title

26 Feb 2020

Date