

CERTIFICATE OF ANALYSIS

Product: Fetal Bovine Serum
Grade: Ultimate
Part Number: 1600
Lot Number: 295B14
Total Volume: 480.0 Liters

Product Origin: Collected and Processed in USA
Filtration: Triple 0.1µm Sterile Filtered
Manufacture Date: October 2014
Expiration Date: November 2019
Storage: -10°C to -20°C

CERTIFIED ANALYSIS

Test/Method	Unit of Measure	Specification	Result
Bovine Viral Diarrhea Virus (qPCR Technology)	N/A	Not Detected	Not Detected
Endotoxin (Limulus Amebocyte Lysate-Gel Clot, USP 85)	EU/mL	≤10	<2.0
Hemoglobin (Fleming & Woolf)	mg/dL	≤25	13.05
Sterility (Current USP and EP 2.6.1 for Bacteria & Fungi)	N/A	No Growth	No Growth
Mycoplasma (Barile & Kern; Large Volume, Direct Culture)	N/A	Not Detected	Not Detected
pH (USP 791)	N/A	Test & Report	7.18
Osmolality (USP 785)	mOsm/KgH2O	Test & Report	296.0
Virus Testing (9 CFR 113.53c)			
Bluetongue	N/A	Not Detected	Not Detected
Bovine Adenovirus	N/A	Not Detected	Not Detected
Bovine Parvovirus	N/A	Not Detected	Not Detected
Bovine Respiratory Syncytial Virus	N/A	Not Detected	Not Detected
Bovine Viral Diarrhea Virus	N/A	Not Detected	Not Detected
Rabies	N/A	Not Detected	Not Detected
Reovirus	N/A	Not Detected	Not Detected
Cytopathogenic Agents (IBR)	N/A	Not Detected	Not Detected
Hemadsorbing Agents (PI3)	N/A	Not Detected	Not Detected

BIOCHEMICAL ASSAY

Test/Method	Unit of Measure	Result	Test/Method	Unit of Measure	Result
Albumin	gm/dL	2.3	Triglycerides	mg/dL	52.0
Alkaline Phosphatase	U/L	189.0	Urea Nitrogen (BUN)	mg/dL	14.0
ALT (SGPT)	U/L	5.0	Uric Acid	mg/dL	2.5
AST (SGOT)	U/L	32.0	Electrophoretic Profile		
Bilirubin – Total	mg/dL	0.2	Alpha 1 & 2	g/dL	1.3
Calcium	mg/dL	13.6	Beta 1 & 2	g/dL	0.3
Chloride	mEq/L	99.0	Gamma 1	N/A	Not detected
Cholesterol	mg/dL	32.0	Hormone Profile		
Creatinine	mg/dL	2.7	Cortisol	µg/dL	0.3
Glucose	U/L	87.0	Estradiol	pg/mL	24.64
IgG (ELISA)	µg/dL	76.0	Insulin	µIU/mL	7.99
Phosphorus	mg/dL	9.1	Progesterone	ng/mL	<0.05
Potassium	mEq/L	10.0	T3 Baseline	µg/dL	0.72
Protein – Total	gm/dL	3.6	T4 Baseline	ng/mL	14.95
Sodium	mEq/L	136.0	Testosterone	ng/mL	0.13

STATEMENTS

Statement of Origin: This product was manufactured from fetal bovine blood collected exclusively from approved harvest facilities. All fetal bovine serum used in this product is derived from fetuses collected from cows that are of United States origin and have passed ante- and post-mortem inspection. All harvest facilities are USDA inspected and located within the continental United States of America. All collection and processing activities are performed under the strict guidance of standard operating procedures.

Statement of Intended Use: This product is intended for further manufacturing or research use. This product is not intended for human or therapeutic use.

ISIA Certified Traceability: All raw serum is certified by the International Serum Industry Association (ISIA) to be sourced in accordance with their strict traceability guidelines (www.serumindustry.org).

ISIA Compliant Documentation: This document complies with all documentation standards issue by the ISIA regarding the definition, quality control, country of origin and certified analysis of fetal bovine serum (www.serumindustry.org).



QC DEPARTMENT APPROVAL

Electronic Signature: *Sherrie Drake Hirschi*
Sherrie Drake Hirschi

Date: 13 February 2015