CORNING

Certificate of Analysis

Heat Inactivated Fetal Bovine Serum **Product:**

Description: Regular,

South American Origin

Catalog Number: Lot Number: 35-089-CV 01421002

Date of Heat Heat Inactivation Individual Bottle 23 MAR 2021

Inactivation: Type: Inactivation

Product Prior to Heat 56°C (±2°C) for 30 **Heat Inactivation Testing Performed on:**

Inactivation minutes Temperature:

Parent Catalog 35-079-CV Parent Lot Number: 01421001 Number:

Date of Manufacture: 13 JAN 2021 **Date of Expiration: JAN 2026**

Country of Raw Country of Final

Brazil **United Kingdom Material Origin: Processing:**

Sterility Assurance Triple 0.1 µm Filtered Storage: -40°C to -10°C Level:

Test Method Specification Results Units Endotoxin USP <85 > & EP 2.6.14 ≤ 20 <4 EU/mL Hemoglobin Spectrophotometric ≤ 30 8.9 mg/dL Mycoplasma Not Detected Not Detected N/A Osmolality Freezing point depression 260 – 350 334 mcSmr/kg H₂C pH PH 6.5 – 8.5 7.35 N/A Sterlifty (Bacteria & Fungi) USP <71> & EP 2.6.1 No Growth No Growth N/A Sterlifty (Bacteria & Fungi) USP <1057 > & EP 2.5.33 3.0 – 4.5 3.84 g/dL Gamma-Glutamyl Transferase (GGT) USP <1057 > & EP 2.5.33 3.0 – 4.5 3.84 g/dL Gell Growth Performance Testing Passed Passed N/A W/A Biochemical Testing - Proteins & Organic Compounds Seported 49 U/L Alkaline Phosphatase As Reported 390 U/L Cholesterol As Reported 3.2 U/L Guttamic Oxaloacetic Transaminase (AST) As					
Hemoglobin Spectrophotometric ≤ 30 8.9 mg/dL	Test	Method	Specification	Results	Units
Mycoplasma Not Detected Not Detected N/A Osmolality Freezing point depression 260 – 350 334 mOsm/kg Hz Construction pH pH Meter 6.5 – 8.5 7.35 N/A Sterility (Bacteria & Fungi) USP <71> & EP 2.6.1 No Growth No Growth N/A Total Protein USP <1057> & EP 2.5.33 3.0 – 4.5 3.84 g/dL Gamma-Glutamyl Transferase (GGT) \$10 4 IU/L Cell Growth Performance Testing Passed Passed N/A Biochemical Testing - Proteins & Organic Compounts As Reported 390 IU/L Alkaline Phosphatase As Reported 390 IU/L Cholesterol As Reported 3.2 mg/dL Creatinine As Reported 3.2 mg/dL Glutamic Oxaloacetic Transaminase (AST) As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 34.2 mg/dL Urea	Endotoxin	USP <85> & EP 2.6.14	≤ 20	<4	EU/mL
Osmolality pH Freezing point depression pH Meter 260 – 350 334 mOsm/kg H ₂ C pH PH pH Meter 6.5 – 8.5 7.35 N/A Sterility (Bacteria & Fungi) USP <71> & EP 2.6.1 No Growth No Growth N/A Total Protein USP <1057> & EP 2.5.33 3.0 – 4.5 3.84 g/dL Gamma-Glutamyl Transferase (GGT) S10 4 IU/L Cell Growth Performance Testing Passed Passed N/A Biochemical Testing - Proteins & Organic Compounts As Reported 390 IU/L Alkaline Phosphatase As Reported 390 IU/L Cholesterol As Reported 3.2 mg/dL Creatinine As Reported 3.2 mg/dL Glutamic Oxaloacetic Transaminase (AST) As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 34.2 mg/dL Urea As Reported 34.9 mg/dL Biochemical Testing - El	Hemoglobin	Spectrophotometric	≤ 30	8.9	mg/dL
pH pH Meter 6.5 − 8.5 7.35 N/A Sterility (Bacteria & Fungi) USP <71> & EP 2.6.1 No Growth No Growth N/A Total Protein USP <1057> & EP 2.5.33 3.0 − 4.5 3.84 g/dL Gamma-Glutamyl Transferase (GGT) ≤10 4 IU/L Cell Growth Performance Testing Passed Passed N/A Biochemical Testing - Proteins & Organic Compounds As Reported 390 IU/L Alkaline Phosphatase As Reported 390 IU/L Cholesterol As Reported 3.2 mg/dL Creatinine As Reported 3.2 mg/dL Glutamic Oxaloacetic Transaminase (AST) As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 54.9 mg/dL Urea As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Normal Normal Normal Albumin As Reported <td< td=""><td>Mycoplasma</td><td></td><td>Not Detected</td><td>Not Detected</td><td>N/A</td></td<>	Mycoplasma		Not Detected	Not Detected	N/A
Sterility (Bacteria & Fungi) USP <71> & EP 2.6.1 No Growth No Growth N/A Total Protein USP <1057> & EP 2.5.33 3.0 - 4.5 3.84 g/dL Gamma-Glutamyl Transferase (GGT) ≤10 4 IU/L Cell Growth Performance Testing Passed Passed N/A Biochemical Testing - Proteins & Organic Compounds As Reported 390 IU/L Alkaline Phosphatase As Reported 27.1 mg/dL Cholesterol As Reported 3.2 mg/dL Creatinine As Reported 3.2 mg/dL Glutamic Oxaloacetic Transaminase (AST) As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 54.9 mg/dL Triglyceride As Reported 34.2 mg/dL Urea As Reported 1.60.9 g/dL Biochemical Testing - Electrophoretic Profile Normal Normal Normal N/A As Reported 1.49	Osmolality	Freezing point depression	260 - 350	334	mOsm/kg H₂C
Total Protein USP <1057> & EP 2.5.33 3.0 − 4.5 3.84 g/dL Gamma-Glutamyl Transferase (GGT) ≤10 4 IU/L Cell Growth Performance Testing passed Passed N/A Biochemical Testing - Proteins & Organic Compounds V V V Alkaline Phosphatase As Reported 390 IU/L Cholesterol As Reported 27.1 mg/dL Creatinine As Reported 3.2 mg/dL Glutamic Oxaloacetic Transaminase (AST) As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 54.9 mg/dL Triglyceride As Reported 54.9 mg/dL Urea As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Normal Normal N/A Alpha As Reported 1.69 g/dL As Reported 0.21 g/dL As Reported 0.41 g	рН	pH Meter	6.5 - 8.5	7.35	N/A
Gamma-Glutamyl Transferase (GGT) \$\frac{10}{2}\$ Assed Passed N/A Biochemical Testing - Proteins & Organic Compounds Alkaline Phosphatase As Reported 390 IU/L Cholesterol As Reported 27.1 mg/dL Creatinine As Reported 3.2 mg/dL Glutamic Oxaloacetic Transaminase (AST) As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 54.9 mg/dL Triglyceride As Reported 54.9 mg/dL Urea As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Normal Normal Normal N/A Albumin Albumin As Reported 1.69 g/dL Beta As Reported 1.49 g/dL Beta As Reported 0.41 g/dL Beta As Reported 0.41 g/dL Biochemical Testing - Trace Metals Calcium As Reported 1.4.0 mg/dL	Sterility (Bacteria & Fungi)	USP <71> & EP 2.6.1	No Growth	No Growth	N/A
Cell Growth Performance Testing Passed Passed N/A Biochemical Testing - Proteins & Organic Compounds Alkaline Phosphatase As Reported 390 IU/L Cholesterol As Reported 27.1 mg/dL Creatinine As Reported 3.2 mg/dL Glutamic Oxaloacetic Transaminase (AST) As Reported 42 IU/L Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 0.2 mg/dL Triglyceride As Reported 54.9 mg/dL Urea As Reported 54.9 mg/dL Biochemical Testing - Electrophoretic Profile Normal Normal Normal N/A Albumin Albumin As Reported 1.69 g/dL Beta As Reported 0.21 mg/dL Beta As Reported 0.22 mg/dL Biochemical Testing - Electrophoretic Profile As Reported 1.69 g/dL Beta As Reported 0.41 g/dL Biochemical Testing - Trace Metals Calcium As Reported 1.40 mg/dL	Total Protein	USP <1057> & EP 2.5.33	3.0 - 4.5	3.84	g/dL
Biochemical Testing - Proteins & Organic Compounds Alkaline Phosphatase Alkaline Phosphatase Cholesterol As Reported As Repor	Gamma-Glutamyl Transferase (GGT)		≤10	4	IU/L
Alkaline Phosphatase Cholesterol Cholesterol As Reported As Report	Cell Growth Performance Testing		Passed	Passed	N/A
Cholesterol Creatinine Glutamic Oxaloacetic Transaminase (AST) Immunoglobulin G (IgG) As Reported Biolohemical Testing - Electrophoretic Profile Albumin Albumin Albumin Albumin Albumin As Reported A	Biochemical Testing - Proteins & Organic Compou	ınds			
Creatinine Glutamic Oxaloacetic Transaminase (AST) Immunoglobulin G (IgG) ELISA As Reported As Reporte	Alkaline Phosphatase		As Reported	390	IU/L
Glutamic Oxaloacetic Transaminase (AST) Immunoglobulin G (IgG) ELISA As Reported 160.0 µg/mL Total Bilirubin As Reported 0.2 mg/dL Triglyceride Urea As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Albumin Albumin As Reported As Reported As Reported 34.2 mg/dL Normal Normal Normal Normal N/A Albumin As Reported 1.69 g/dL As Reported As Reported 1.49 g/dL Beta Gamma As Reported 0.41 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Cholesterol		As Reported	27.1	mg/dL
Immunoglobulin G (IgG)ELISAAs Reported160.0µg/mLTotal BilirubinAs Reported0.2mg/dLTriglycerideAs Reported54.9mg/dLUreaAs Reported34.2mg/dLBiochemical Testing - Electrophoretic ProfileNormalNormalNormalAlbuminAs Reported1.69g/dLAlphaAs Reported1.49g/dLBetaAs Reported0.41g/dLGammaAs Reported0.25g/dLBiochemical Testing - Trace MetalsAs Reported14.0mg/dL	Creatinine		As Reported	3.2	mg/dL
Total Bilirubin As Reported O.2 mg/dL Triglyceride As Reported Urea As Reported As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Albumin Albumin As Reported As Reported As Reported As Reported 1.69 g/dL Alpha As Reported 1.49 g/dL Beta As Reported As Reported O.41 g/dL Biochemical Testing - Trace Metals Calcium As Reported As Reported As Reported As Reported 1.4.0 mg/dL	Glutamic Oxaloacetic Transaminase (AST)		As Reported	42	IU/L
Triglyceride As Reported 54.9 mg/dL Urea As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Normal Normal N/A Albumin As Reported 1.69 g/dL Alpha As Reported 1.49 g/dL Beta As Reported 0.41 g/dL Gamma As Reported 0.25 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Immunoglobulin G (IgG)	ELISA	As Reported	160.0	μg/mL
Urea As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Normal Normal N/A Albumin As Reported 1.69 g/dL Alpha As Reported 1.49 g/dL Beta As Reported 0.41 g/dL Gamma As Reported 0.25 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Total Bilirubin		As Reported	0.2	mg/dL
Urea As Reported 34.2 mg/dL Biochemical Testing - Electrophoretic Profile Normal Normal N/A Albumin As Reported 1.69 g/dL Alpha As Reported 1.49 g/dL Beta As Reported 0.41 g/dL Gamma As Reported 0.25 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Triglyceride		As Reported	54.9	mg/dL
Albumin As Reported 1.69 g/dL Alpha As Reported 1.49 g/dL Beta As Reported 0.41 g/dL Gamma As Reported 0.25 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL			As Reported	34.2	mg/dL
Alpha As Reported 1.49 g/dL Beta As Reported 0.41 g/dL Gamma As Reported 0.25 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Biochemical Testing - Electrophoretic Profile		Normal	Normal	N/A
Beta As Reported 0.41 g/dL Gamma As Reported 0.25 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Albumin		As Reported	1.69	g/dL
Gamma As Reported 0.25 g/dL Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Alpha		As Reported	1.49	g/dL
Biochemical Testing - Trace Metals Calcium As Reported 14.0 mg/dL	Beta		As Reported	0.41	g/dL
Calcium As Reported 14.0 mg/dL	Gamma		As Reported	0.25	g/dL
Calcium As Reported 14.0 mg/dL	Biochemical Testing - Trace Metals				-
Magnesium As Reported 3.2 mg/dL			As Reported	14.0	mg/dL
	Magnesium		As Reported	3.2	mg/dL

PhosphorusAs Reported8.4mg/dLPotassiumAs Reported11.3mmol/LSodiumAs Reported135mmol/L

Notes:

For additional information on this Mediatech product, please contact our Technical Services department at (800) 492-1110 or via email at scientificsupport@corning.com.

This product was tested in accordance with Mediatech, Inc. specifications and procedures current as of date of manufacture. Testing procedures are maintained in compliance with the current versions of the USP and/or EP, where applicable.

Cell lines used in Cell Growth Performance Testing: MRC5, L929, C2C12, LLC-PK1, Vero, MDCK and Sp20-Ag14.

For research or further manufacturing uses only. Not for use as an excipient. Not for therapeutic or diagnostic uses. Not for human or animal consumption. Utilization of this product apart from the labeled intended use may be a violation of local and/or Federal Law.

Origin and BSE/TSE Statements:

The aforementioned lot was manufactured from fetal bovine blood collected from government approved harvest facilities located in Brazil, a country recognized by the United States Department of Agriculture - Animal and Plant Health Inspection Service (USDA-APHIS) and the World Organization for Animal Health (OIE) as having a negligible risk of Bovine Spongiform Encephalopathy (BSE), a bovine-specific Transmissible Spongiform Encephalopathy (TSE). All fetal bovine serum is derived from fetuses collected from healthy bovine cows and heifers that have passed ante and post mortem inspection and were found free of contagious diseases. This material was exported from Brazil accompanied by a Veterinary Health certificate. Once inside the European Union, the material was inspected at the Boarder Inspection Post and released by the issuance of a Community Veterinary Entry Document ensuring that the collection facility and the importer are both cleared as suitable exporters and importers within the EU Traceability system.

The following signatures indicate the above material has met all quality specifications and has been reviewed by a Quality representative.

Written By/Date:

16 APR 2021

Reviewed By/Date:

Jacah Fog

19 APR 202

Lot Number: 01421002