

CERTIFICATE OF ANALYSIS

Fetal Bovine Serum

Premium Select

(Catalog Number S11550, S11595)

Lot Number: A325003

Date of Manufacture: Feb2025

Product Expiry: Feb2030

Origin: El Salvador

Storage Temperature: ≤-10°C

For cell culture, further manufacturing or research use only. Not for direct therapeutic use.

Product Description: Fetal Bovine Serum Premium Select is a triple 0.1 µm filter processed serum.

Notice: The serum was collected and processed rapidly at cold temperatures to yield the highest quality serum with excellent cell growth properties. This cold processing leaves some fibrinogen in the serum which may convert to fibrin upon storage, thawing, or heat-inactivation. Fibrin can cause the serum to look slightly turbid or may be visible as a flocculent material. This material does not adversely affect the growth performance characteristics of the serum.

Test	Methodology	Specification	Analysis
Bacterial and Fungal Testing	U.S.P. Modified	Not Detected	Not Detected
Mycoplasma Testing	Large Volume Barile Method	Not Detected	Not Detected
Mycoplasma Testing, Supplemental	DNA Fluorochrome Stain	Not Detected	Not Detected
Viral Testing	Full 9CFR		
BVDV - Fluorescent Antibody		Test	Tested
Cytopathogenic Agents - e.g. IBRV		Not Detected	Not Detected
Hemadsorbing Agents - e.g. PI-3V		Not Detected	Not Detected
BTV		Not Detected	Not Detected
BRSV		Not Detected	Not Detected
Bovine Parvo		Not Detected	Not Detected
Bovine Adeno 3		Not Detected	Not Detected
Bovine Adeno 5		Not Detected	Not Detected
Reo Virus		Not Detected	Not Detected
Rabies Virus		Not Detected	Not Detected
Cell Culture Testing		Pass	Passed
pH		6.8 - 7.8	7.37
Osmolality		280 - 335 mOsm	315 mOsm
Endotoxin	Limulus Amebocyte Lysate Gel Clot	≤ 15.0 EU/mL	5 EU/mL
Hemoglobin	Spectrophotometric	≤ 15 mg/dL	7.74 mg/dL



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Insulin Progesterone Check and Record Progesterone Testosterone Thyroxine (T4) - total Check and Record Total Protein Albumin Globulin A/G ratio Check and Record Check and Record Check and Record Thyroxine (T4) - total Check and Record Thyroxine Thyroxine (T4) - total Thyro	Test	Methodology	Specification	Analysis
Progesterone Testosterone Testosterone Total Profile Total Protein Albumin Algorithm Prospect Algorithm Profile Total Protein Total Protein Algorithm Profile Total Protein Algorithm Protein Algorithm Profile Total Protein Algorithm Profile Total Protein Algorithm Protein Algorithm Profile Algorithm Pr	Hormone Profile			
Progesterone Testosterone Thyroxine (T4) - total Biochemical Profile Total Protein Albumin ALT/SGPT Alkaline Phosphatase Total Bilirubin Iron UIBC Check and Record Check and Record Check and Record Albumin Check and Record Albumin Check and Record ALT/SGPT Alkaline Phosphatase Total Bilirubin Check and Record Check and Record Check and Record Als Ilirubin Check and Record Check and Record Check and Record Alt Iron Check and Record Alt Iron Check and Record Alt Iron Check and Record Triglycerides Check and Record Check and Recor	Insulin		Check and Record	8.12 μU/mL
Thyroxine (T4) - total Biochemical Profile Total Protein Albumin Check and Record Globulin A/G ratio IgG Check and Record ALT/SGPT Check and Record Check and R	Progesterone		Check and Record	•
Thyroxine (T4) - total Biochemical Profile Total Protein Albumin Check and Record Albumin Check and Record Check and Record Check and Record Check and Record Albumin Check and Record Check and Record Algorithms ALT/SGPT Check and Record SU/L Alkaline Phosphatase Check and Record Check and Recor	Testosterone		Check and Record	0.01 ng/mL
Biochemical Profile Total Protein Albumin Check and Record Check and Record Check and Record Alforatio IgG Check and Record Check and Record Check and Record Alforatio Check and Record Check and Record Check and Record Alforatio Check and Record Check and Record Check and Record Check and Record Sull GGT Check and Record Check	Thyroxine (T4) - total		Check and Record	
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Globulin A/G ratio Check and Record SU/L GGT Check and Record Check and Re	Total Protein		3.0 - 4.6 g/dL	3.7 g/dL
A/G ratio IgG Check and Record Check and Record Check and Record O.6015 mg/ml ALT/SGPT Check and Record S U/L GGT Check and Record Check and Record Check and Record S U/L Alkaline Phosphatase Check and Record Check and Record Iron Check and Record Check and Record UIBC Check and Record Check and Record Check and Record In g/dL Cholesterol Check and Record Check and Record Triglycerides Check and Record Check and Record Triglycerides Check and Record Check and Record To mg/dL Glucose Check and Record Check and Record To mg/dL Creatinine Check and Record Check and Record Check and Record Is mg/dL Creatinine Check and Record In g/dL Sodium Check and Record Check and Record Check and Record In g/dL Choloride Check and Record Check and Record In g/dL Check and Record Check and Record In g/dL Check and Record Check and Record In g/dL Check and Record In g/dL Check and Record Check and	Albumin		Check and Record	2.1 g/dL
A/G ratio IgG Check and Record SU/L Check and Record Triglycerides Check and Record T5 mg/dL Creatinine Check and Record Ch	Globulin		Check and Record	1.5 g/dL
ALT/SGPT GGT Check and Record GGT Check and Record UIBC Cholesterol Check and Record Check and Record Check and Record Check and Record Triglycerides Check and Record Check and Record Check and Record To mg/dL Check and Record	A/G ratio		Check and Record	1.32
GGT Alkaline Phosphatase Check and Record UIBC Cholesterol Check and Record Triglycerides Check and Record Check and Record Check and Record To mg/dL Glucose Check and Record Check and Record Check and Record Check and Record To mg/dL Creatinine Check and Record Check and Reco	IgG		Check and Record	0.6015 mg/mL
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Total Bilirubin Check and Record 185 μg/dL	GGT		Check and Record	5 U/L
Total Bilirubin Iron Check and Record Check and Record 185 μg/dL UIBC Cholesterol Triglycerides Check and Record Glucose Blood Urea Nitrogen (BUN) Creatinine BUN/Creatinine Ratio Uric Acid Sodium Potassium Check and Record 112.9 mmol/L Sodium/Potassium Ratio Check and Record Check and Record 1103 mmol/L Calcium Check and Record Check and Record Check and Record 13.9 mg/dL Phosphorus Check and Record Check and Record 13.9 mg/dL Magnesium Check and Record 3.1 mg/dL	Alkaline Phosphatase		Check and Record	244 U/L
IronCheck and Record185 μg/dLUIBCCheck and Record106 μg/dLCholesterolCheck and Record31 mg/dLTriglyceridesCheck and Record73 mg/dLGlucoseCheck and Record75 mg/dLBlood Urea Nitrogen (BUN)Check and Record18 mg/dLCreatinineCheck and Record2.6 mg/dLBUN/Creatinine RatioCheck and Record6.92Uric AcidCheck and Record2.1 mg/dLSodiumCheck and Record142 mmol/LPotassiumCheck and Record12.9 mmol/LSodium/Potassium RatioCheck and Record103 mmol/LChlorideCheck and Record103 mmol/LCalciumCheck and Record13.9 mg/dLPhosphorusCheck and Record9.5 mg/dLMagnesiumCheck and Record3.1 mg/dL	Total Bilirubin		Check and Record	
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CreatinineCheck and Record2.6 mg/dLBUN/Creatinine RatioCheck and Record6.92Uric AcidCheck and Record2.1 mg/dLSodiumCheck and Record142 mmol/LPotassiumCheck and Record12.9 mmol/LSodium/Potassium RatioCheck and Record11ChlorideCheck and Record103 mmol/LCalciumCheck and Record13.9 mg/dLPhosphorusCheck and Record9.5 mg/dLMagnesiumCheck and Record3.1 mg/dL	Glucose		Check and Record	
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Uric Acid Sodium Check and Record Check and Record Check and Record Potassium Check and Record Check and Record Check and Record Check and Record Chloride Check and Record Phosphorus Check and Record Magnesium Check and Record 3.1 mg/dL	Creatinine		Check and Record	
Sodium Potassium Check and Record Potassium Check and Record Phosphorus Check and Record Magnesium Check and Record 3.1 mg/dL	BUN/Creatinine Ratio		Check and Record	6.92
SodiumCheck and Record142 mmol/LPotassiumCheck and Record12.9 mmol/LSodium/Potassium RatioCheck and Record11ChlorideCheck and Record103 mmol/LCalciumCheck and Record13.9 mg/dLPhosphorusCheck and Record9.5 mg/dLMagnesiumCheck and Record3.1 mg/dL	Uric Acid		Check and Record	2.1 mg/dL
Sodium/Potassium Ratio Chloride Chloride Check and Record Check and Record Check and Record Check and Record 103 mmol/L Calcium Check and Record Phosphorus Check and Record Magnesium Check and Record 3.1 mg/dL	Sodium		Check and Record	
Chloride Check and Record 103 mmol/L Calcium Check and Record 13.9 mg/dL Phosphorus Check and Record 9.5 mg/dL Magnesium Check and Record 3.1 mg/dL	Potassium		Check and Record	12.9 mmol/L
Calcium Check and Record 13.9 mg/dL Phosphorus Check and Record 9.5 mg/dL Magnesium Check and Record 3.1 mg/dL	Sodium/Potassium Ratio		Check and Record	11
Phosphorus Check and Record 9.5 mg/dL Magnesium Check and Record 3.1 mg/dL	Chloride		Check and Record	103 mmol/L
Phosphorus Check and Record 9.5 mg/dL Magnesium Check and Record 3.1 mg/dL	Calcium		Check and Record	•
Magnesium Check and Record 3.1 mg/dL	Phosphorus		Check and Record	
	Magnesium		Check and Record	
	Bicarbonate		Check and Record	



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The fetal bovine serum used in the manufacturing process is certified as meeting all USDA requirements for donor animal health, country of origin, and traceability of the product.

Origin: The fetal bovine serum is collected in USDA approved slaughterhouses or in countries certified by the USDA to be free of Foot and Mouth Disease (FMD) and other exotic disease agents. All imported serum used for manufacturing purposes is Safety tested and approved by the USDA for distribution in the United States.

TSE/BSE Statement: Product-specific validated virus removal studies have not been conducted for the majority of offered items. Statements to confirm that a product is "free of TSE/BSE" are not scientifically possible; consequently, we cannot state definitively that a material is TSE/BSE free. This product does contain animal-derived raw materials and GeminiBio maintains information confirming these materials are sourced from countries considered as negligible or controlled (Canada) risk for BSE by the World Organisation for Animal Health.

Donor Animals: All fetal blood is collected from fetuses derived from healthy animals. The donor dams must pass both ante- and post-mortem certified veterinary inspections before collection of the fetal blood.

Traceability: The serum has been imported into the United States in full compliance with all USDA import regulations. Final processing of the serum took place in a processing facility located in the United States. All fetal bovine serum is traceable to the date and location of collection.

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.

Name OIMAY2025

Name Date