



**GEMINI**  
BIO-PRODUCTS

# Certificate of Analysis

Revised February 1, 2019

**Product:** **Human Serum (Normal)**  
0.1µm sterile-filtered

**Catalog #: 100-110**  
**Lot #: H86W03J**  
**Origin: United States (100%)**

**Manufacture Date: Aug 2018**  
**Expiration Date: Aug 2023**

| TEST                           | METHODOLOGY                   | SPECIFICATION   | RESULTS      |
|--------------------------------|-------------------------------|-----------------|--------------|
| <b>Biological Testing</b>      |                               |                 |              |
| Endotoxin                      | LAL                           | < 10 EU/mL      | 0.9 EU/mL    |
| Hemoglobin                     |                               | <20.0 mg/dL     | 5.8 mg/dL    |
| <b>Microbiological Testing</b> |                               |                 |              |
| Sterility                      | USP<71>                       |                 |              |
| Bacteria                       |                               | Not Detected    | Not Detected |
| Fungi                          |                               | Not Detected    | Not Detected |
| Mycoplasma                     | Barile, MF and Kern, J (1971) | Not Detected    | Not Detected |
| <b>Viral Testing</b>           |                               |                 |              |
| HBsAg                          | 21 CFR 610.40                 | Non-Reactive    | Non-Reactive |
| Anti-HCV                       |                               | Non-Reactive    | Non-Reactive |
| Anti-HIV-1/HIV-2               |                               | Non-Reactive    | Non-Reactive |
| Syphilis                       |                               | Negative        | Negative     |
| HBV-NAT                        |                               | Not Detected    | Not Detected |
| HIV-NAT                        |                               | Not Detected    | Not Detected |
| HCV-NAT                        |                               | Not Detected    | Not Detected |
| <b>Physical Testing</b>        |                               |                 |              |
| Osmolality                     | USP<785>                      | 260-350 mOsm/kg | 282 mOsm/kg  |
| pH                             | USP<791>                      | Report          | 7.6          |



# Biochemical Testing

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| TEST             | METHODOLOGY | SPECIFICATION   | RESULTS     |
|------------------|-------------|-----------------|-------------|
| Albumin          |             | Test and Report | 3.6 g/dL    |
| Bilirubin, Total |             | Test and Report | 0.3 mg/dL   |
| Calcium          |             | Test and Report | 2.3 mM      |
| Chloride         |             | Test and Report | 118 mM      |
| Cholesterol      |             | Test and Report | 127 mg/dL   |
| Creatinine       |             | Test and Report | <0.20 mg/dL |
| Glucose          |             | Test and Report | 5.16 mM     |
| Phosphorus       |             | Test and Report | 0.90 mM     |
| Potassium        |             | Test and Report | 3.8 mM      |
| Protein, Total   | Biuret      | Test and Report | 5.6 g/dL    |
| Sodium           |             | Test and Report | 138 mM      |
| Triglycerides    |             | Test and Report | 76 mg/dL    |

All human blood products are collected from stringently screened male donors at FDA-licensed collection centers in the United States. Results shown were obtained by carefully performed methods believed to be reliable. As some results may vary for specific tests depending upon methodology and other variables, it is suggested that tests for which results are particularly important be repeated by the user of this product. Lot specific samples are available at the customer's request and users are encouraged to evaluate the sample prior to purchase. Precipitates may develop in this product upon freezing and/or thawing; this occurrence does not impact culture performance.

**CAUTION:** For Cell Culture, further Manufacturing and Research use only. Not for direct Therapeutic use. It is the responsibility of the user to undertake verification and testing to determine the suitability of this product's application. The statements herein are offered for informational purposes and are intended to be used solely for your consideration, investigation and verification.

  
Created by/ date

  
Verified by/ date