



CERTIFICATE OF ANALYSIS

Sodium Calibration Standard for Oxidized Feed Hydrolysate 1700-0155

Product: Oxidized Feed Hydrolysate Standard

Part Number: 1700-0155

Lot Number: 005026

Production Date: May 29, 2020

Expiration Date: May 29, 2023

Primary Application: This calibration standard is a solution of 16 amino acids and ammonia in 0.27 N sodium citrate buffer, pH 2.2. This calibration standard is intended to be used for calibration of chromatographic instrumentation for determination of amino acids.

Acceptance Criteria: The concentrations for 16 amino acids and ammonia are within $\pm 4\%$ of those stated below. These values are based on the results of HPLC analysis using certified NIST amino acids standard and Sigma amino acids standard.

| Compound | Concentrations $\mu\text{M/mL}$ |
|--------------------------|---------------------------------|
| L-Alanine | 0.25 |
| Ammonia | 0.25 |
| L-Arginine | 0.25 |
| L-Aspartic acid | 0.25 |
| L-Cysteic acid | 0.25 |
| L-Glutamic acid | 0.25 |
| Glycine | 0.25 |
| L-Histidine | 0.25 |
| L-Isoleucine | 0.25 |
| L-Leucine | 0.25 |
| L-Lysine | 0.25 |
| L-Methionine-D,L sulfone | 0.25 |
| L-Phenylalanine | 0.25 |
| L-Proline | 0.25 |
| L-Serine | 0.25 |
| L-Threonine | 0.25 |
| L-Valine | 0.25 |

Storage Conditions: Keep frozen

Analysis Certified by: Maria Ofitserova, Ph.D.
Senior Research Chemist
Title

Date: July 2, 2020