# CERTIFICATE OF ANALYSIS

## Native Sample Calibration Standard - Acidics and Neutrals
## In 0.1N HCl, 2.5umole/mL
## 1700-0180

**Product:** Native Sample Calibration Standard - acidics and neutrals
**Part Number:** 1700-0180
**Lot Number:** 612034
**Production Date:** 19 Jan 2017
**Expiration Date:** 19 Jan 2020

**Primary Application:** This calibration standard is a solution of 27 amino acids in 0.1N Hydrochloric acid. This calibration standard is intended to be used for calibration of chromatographic instrumentation for determination of amino acids.

**Acceptance Criteria:** The concentrations for 27 amino acids are within ± 4% of those stated below. These values are based on the results of HPLC analysis using certified Sigma amino acids standard.

| Compound | Concentrations µM/mL |
|---|---|
| β-Alanine | 2.5 |
| L-Alanine | 2.5 |
| D,L-α-amino-adipic acid | 2.5 |
| L-2-Amino-n-butyric acid | 2.5 |
| D,L-β-Amino-*i*-butyric acid | 2.5 |
| L-Asparagine | 2.5 |
| L-Aspartic acid | 2.5 |
| Citrulline | 2.5 |
| L-Cystathionine | 2.5 |
| L-Cystine | 1.25 |
| L-Glutamic acid | 2.5 |
| Glycine | 2.5 |
| 4-trans-L-Hydroxyproline | 2.5 |
| L-Isoleucine | 2.5 |
| L-Leucine | 2.5 |
| L-Methionine | 2.5 |
| L-Phenylalanine | 2.5 |
| *o*-Phosphoethanolamine | 2.5 |
| *o*-Phospho-L-serine | 2.5 |
| L-Proline | 2.5 |

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| | |
|---|---|
| Sarcosine | 2.5 |
| L-Serine | 2.5 |
| Taurine | 2.5 |
| L-Threonine | 2.5 |
| L-Tyrosine | 2.5 |
| Urea | 2.5 |
| L-Valine | 2.5 |

**Storage Conditions: Keep frozen**

**Analysis Certified by:** Jim Murphy **Date:** August 1, 2017

President

**Title**



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