



## CERTIFICATE OF ANALYSIS

### Sodium Calibration Standard for Collagen Hydrolysate 012506C

**Product:** Sodium Calibration Standard for Collagen Hydrolysate

**Part Number:** 012506C

**Lot Number:** 307038

**Production Date:** 03 Jul 2013

**Expiration Date:** 03 Jul 2016

**Primary Application:** This calibration standard is a solution of 20 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 20 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 $\mu\text{M}/\text{mL}$
L-Alanine	0.25
Ammonia	0.25
L-Arginine	0.25
L-Aspartic acid	0.25
L-Cystine	0.25
L-Glutamic acid	0.25
Glycine	0.25
L-Histidine	0.25
D,L &allo-Hydroxylysine	0.25
4-trans-L-Hydroxyproline	1.25
L-Isoleucine	0.25
L-Leucine	0.25
L-Lysine	0.25
L-Methionine	0.25
Methionine-D,L-sulfoxide	0.25
L-Phenylalanine	0.25
L-Proline	1.25
L-Serine	0.25
L-Threonine	0.25
L-Tyrosine	0.25
L-Valine	0.25

**Analysis Certified by:**

Jim Murphy

President

Title

**Date:**

30 Aug 2013