



CERTIFICATE OF ANALYSIS

Sodium Calibration Standard for Collagen Hydrolysate 012506C

Product: Collagen Hydrolysate Standard

Part Number: 012506C

Lot Number: 807028

Production Date: September 4, 2018

Expiration Date: September 4, 2021

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 Sigma amino acids standard and QC certified lot of 012506C.

Compound	Concentrations $\mu\text{M/mL}$
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

Storage Conditions: Keep frozen

Analysis Certified by: Jim Murphy
President

Title

Date: 10/25/2018