



CERTIFICATE OF ANALYSIS

Sodium Calibration Standard For Protein Hydrolysate 012506H

Product: Sodium Calibration Standard for Protein Hydrolysate

Part Number: 012506H

Lot Number: 709037

Test Start Date: 01 Oct 07

Primary Application: This calibration standard is a solution of 19 amino acids and ammonia in 0.27 N sodium citrate buffer, pH 2.2., with 0.01 N phenol added as a preservative. This calibration standard is intended to be used for calibration of chromatographic instrumentation for determination of amino acids.

Acceptance Criteria: The concentrations for 19 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
L-Isoleucine	0.25
L-Leucine	0.25
L-Lysine	0.25
L-Methionine	0.25
L-Phenylalanine	0.25
L-Proline	0.25
L-Serine	0.25
L-Threonine	0.25
L-Tryptophan	0.25
L-Tyrosine	0.25
L-Valine	0.25

Analysis Certified by: _____

John Murphy
VP Operations
Title

Date: _____

01 Oct 07

Rev. 4, 1/28/04

ACCEPTED
PICKERING LABORATORIES, INC.
QUALITY ASSURANCE