



CERTIFICATE OF ANALYSIS

Amino Acid Calibration Standard 1700-0060

Product: Calibration Standard

Part Number: 1700-0060

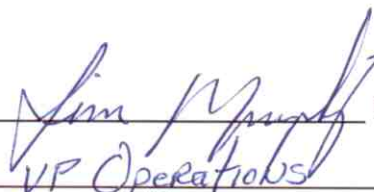
Lot Number: 902008

Primary Application: This calibration standard is a solution of 19 amino acids in 0.10 N 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 19 amino acids 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	Gravimetric Concentrations $\mu\text{M/mL}$	Actual Concentrations $\mu\text{M/mL}$
L-Alanine	2.5	2.5 +/- 0.01
γ -Amino-butyric acid	2.5	2.4 +/- 0.01
Ammonia	2.5	2.3 +/- 0.01
Arginine	2.5	2.3 +/- 0.01
Aspartic acid	2.5	2.4 +/- 0.02
Cystine	2.5	2.4 +/- 0.01
Glutamic acid	2.5	2.5 +/- 0.01
Glycine	2.5	2.5
Histidine	2.5	2.4 +/- 0.01
Isoleucine	2.5	2.5 +/- 0.01
Leucine	2.5	2.6 +/- 0.01
Lysine	2.5	2.5 +/- 0.01
Methionine	2.5	2.5 +/- 0.01
Phenylalanine	2.5	2.5 +/- 0.01
Proline	2.5	2.6 +/- 0.01
Serine	2.5	2.6 +/- 0.01
Threonine	2.5	2.6 +/- 0.02
Tyrosine	2.5	2.5 +/- 0.01
Valine	2.5	2.5 +/- 0.01

Analysis Certified by: _____


VP Operations
Title

Date: _____

02/09/2009

ACCEPTED
PICKERING LABORATORIES, INC.
QUALITY ASSURANCE