

## Certificate of Analysis

Name: Protein Hydrolysate Standard, 2.5 mM  
Item: 80-6002-67  
Lot: CR-0507

Lot Issue Date: 13-Mar 2017  
Expiration Date: 31-Mar 2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system. The analyte concentrations were verified by a quality control laboratory and the true value and uncertainty value at the 95% confidence level for each analyte, calculated from the gravimetric measurements made during the manufacturing process, is listed below.

Analyte	CAS#	True Value	True Value
Taurine	000107-35-7	0.314 ± 0.002 g/L	2.51 mM
L-Aspartic acid	000056-84-8	0.333 ± 0.002 g/L	2.50 mM
L-Threonine	000072-19-5	0.299 ± 0.001 g/L	2.51 mM
L-Serine	000056-45-1	0.264 ± 0.001 g/L	2.51 mM
L-Glutamic acid	000056-86-0	0.370 ± 0.002 g/L	2.51 mM
L-Proline	000147-85-3	0.289 ± 0.001 g/L	2.51 mM
Glycine	000056-40-6	0.189 ± 0.001 g/L	2.52 mM
L-Alanine	000056-41-7	0.224 ± 0.001 g/L	2.51 mM
L-Valine	000072-18-4	0.293 ± 0.001 g/L	2.50 mM
L-Cystine	000056-89-3	0.301 ± 0.002 g/L	1.25 mM
L-Methionine	000063-68-3	0.373 ± 0.002 g/L	2.50 mM
L-Isoleucine	000073-32-5	0.328 ± 0.002 g/L	2.50 mM
L-Leucine	000061-90-5	0.329 ± 0.002 g/L	2.51 mM
L-Tyrosine	000060-18-4	0.455 ± 0.002 g/L	2.51 mM
L-Phenylalanine	000063-91-2	0.415 ± 0.002 g/L	2.51 mM
Ammonium chloride	012125-02-9	0.134 ± 0.001 g/L	2.50 mM
L-Lysine	000056-87-1	0.366 ± 0.002 g/L	2.50 mM
L-Histidine	000071-00-1	0.389 ± 0.002 g/L	2.51 mM
L-Arginine	000074-79-3	0.437 ± 0.002 g/L	2.51 mM

**Matrix:** 0.1 N Hydrochloric Acid

Balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware were used in the manufacturing of these standards.

  
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