

CERTIFICATE OF ANALYSIS

1. Identification

Catalogue Number Lot Number P190302

20-MGG-170-3

Product Name

Pantothenic Acid-13C3,15N Hemicalcium Salt

Synonyms

N-[(2R)-2,4-Dihydroxy-3,3-dimethyl-1-oxobutyl]-?-alanine-13C3,15N Hemicalcium; (+)-Pantothenic Acid-13C3,15N Hemicalcium; (D)-(+)-Pantothenic Acid-13C3,15N Hemicalcium; D-Pantothenic Acid-13C3,15N Hemicalcium; D-Pantothenic Acid-13C3,15N Hemicalcium; Pantothenic Acid-13C3,15N Hemicalcium; Vitamin B3-13C3,15N Hemicalcium; Vitamin B5-13C3,15N

CAS Number Solubility

356786-94-2 Methanol (Slightly), Water (Slightly)

Source of Product Molecular Formula

 $C_{12}^{13}C_6H_{32}Ca^{15}N_2O_{10} \bullet Ca^{2+}$ Synthetic

Molecular Weight Purity 2 (222.20) +(40.08) >95%

2. Warnings

Hygroscopic 3. Analytical Information **Tests** Specifications Results

99.3%

Structure

Shipping Condition

This Product Is Stable To Be Shipped At Room Temperature

Long Term Storage Conditions

-20°C, Hygroscopic

16515	<u>Specifications</u>	Results
Appearance	Off-White to Pale Beige Solid	Pale Yellow to Pale Beige Solid
NMR	Conforms to Structure	Conforms
CNMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 41.74, %H: 6.57, %N: 5.47
HPLC Purity	>95%	100.00% (ELSD)
MS	Conforms to Structure	Conforms
Isotopic Purity	>95%	99.3%

Additional Information

Normalized Intensity: $d_0 = 0.00\%$, $d_1 = 0.00\%$, $d_2 = 0.04\%$, $d_3 = 2.77\%$, $d_4 = 97.19\%$

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of ± 2%. Isotopic purity is based on mass distribution observed.

The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

C of A Approved by Reviewed by Reviewed by **Test Date Retest Date** Micole Badiali 7/12/2025 7/10/2029 Nicole Yip Nicole Badiali Toni Rantanen Product Quality Specialist Manager, Quality Assurance Quality Assurance Associate