CERTIFICATE OF ANALYSIS

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1. Identification

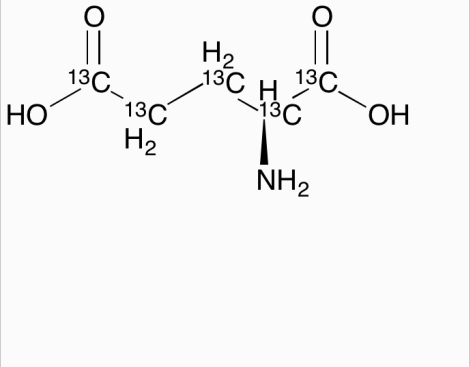
Catalogue Number: G596961

CAS Number: 55443-55-5

Product: L-Glutamic Acid-13C5

Synonym: L-Glutamic-1,2,3,4,5-13C5 Acid

Structure:



Molecular Formula:

$^{13}C_5H_9NO_4$

Molecular weight:

152.09

Source of Product:

N/A

Solubility:

Aqueous Acid (Slightly), Water (Slightly)

Lot Number: 3-MXZ-58-1

Purity: 98%

Shipping Condition: This Product Is Stable To Be Shipped At Room Temperature

Storage Condition: 4°C

2. Warning

Warning 1: **Warning 2:** **Warning 3:**

3. Analytical Information

Tests:	Specifications:	Results:
Appearance	White to Off-White Solid	White to Off-White Solid
NMR	Conforms to Structure	Conforms
C NMR	Conforms to Structure	Conforms
HPLC Purity	Report Result	96.81% (ELSD)
MS	Conforms to Structure	Conforms
Isotopic Purity	>95%	99.3%

Additional Information: Normalized Intensity: 13C0 = 0.01%, 13C1 = 0.00%, 13C2 = 0.01%, 13C3 = 0.06%, 13C4 = 3.44%, 13C5 = 96.48%

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

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
Sarbjeet Kaur	Toni Rantanen	Chanell Chu	8/10/2022	8/8/2026