



CERTIFICATE OF ANALYSIS

20 Martin Ross Avenue, North York, ON, M3J 2K8, CANADA
Tel: (416) 665-9696, Fax: (416) 665-4439
Email: orders.trc@lgcgroup.com Website: www.trc-canada.com

1. Identification

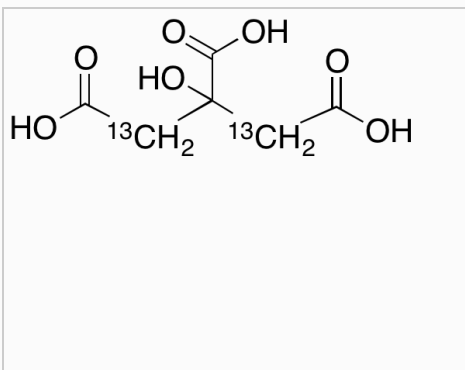
Catalogue Number: C521060

CAS Number: 121633-50-9

Product: Citric acid-2,4-¹³C₂

Synonym: 2-Hydroxy-1,2,3-propane-1,3-¹³C₂-tricarboxylic Acid;

Structure:



Molecular Formula:

C₄¹³C₂H₈O₇

Molecular weight:

194.11

Source of Product:

N/A

Solubility:

DMSO (Slightly), Methanol (Slightly)

Lot Number: 2023-JPO-314

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 Pale Beige Solid	Off-White to Pale Beige Solid
NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 36.86, %H: 4.03
HPLC Purity	Report Result	100.00% (ELSD)
MS	Conforms to Structure	Conforms
Isotopic Purity	>95%	99.2%

Additional Information: Normalized Intensity: ¹³C₀ = 0.16%, ¹³C₁ = 1.20%, ¹³C₂ = 98.65%

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
swathi reddy	Toni Rantanen	Chanell Chu	7/24/2023	7/22/2027
