

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: P998903

Product: Pyruvic Acid-2-13C Sodium Salt

Structure:

Me₁₃C ONa

Lot Number: 1-HBN-132-1

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

CAS Number: 87976-70-3

Synonym: 2-Oxopropanoic Acid-2-13C, Sodium Salt;

Sodium Pyruvate-2-13C; Sodium a-

Ketopropionate-2-13C;

Molecular Formula: C2¹³CH₃NaO₃ Molecular weight:

111.04

Source of Product:

N/A

Solubility:

Water (Slightly)

Purity: 98%

Storage Condition: 4°C

2. Warning

Warning 1: Not Determined Warning 2: Warning 3:

3. Analytical Information

Tests:Specifications:Results:AppearanceWhite to Off-White SolidWhite SolidNMRConforms to StructureConformsMSConforms to StructureConformsIsotopic Purity>95%99.8%

Additional Information: Normalized Intensity: 13C0 = 0.17%, 13C1 = 99.83%

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of \pm 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 ByReviewed ByC of A Approved ByTest DateRetest DateHenry TieuToni RantanenMy Nguyen9/15/20209/13/2027

Muy

ubmy