



CERTIFICATE OF ANALYSIS

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1. Identification

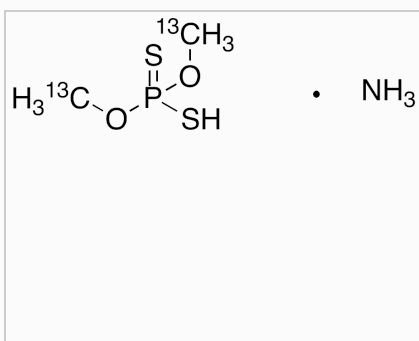
Catalogue Number: D472742

CAS Number: 1329610-82-3

Product: O,O-Dimethyl Dithiophosphate-13C2 Ammonium Salt

Synonym: Phosphorodithioic Acid O,O-Dimethyl Ester-13C2 Ammonium Salt; Ammonium Methyl Phosphorodithioate-13C2; Ammonium O,O-Dimethyl Dithiophosphate-13C2; Ammonium O,O'-Dimethyl Phosphorodithioate-13C2; Ammonium Dimethyldithiophosphate-13C2; O,O-Dimethyldithiophosphoric Acid-13C2 Ammonium Salt;

Structure:



Molecular Formula:

$^{13}\text{C}_2\text{H}_{10}\text{NO}_2\text{PS}_2$

Molecular weight:

177.2

Source of Product:

Synthetic

Solubility:

DMSO (Slightly), Methanol

Lot Number: 7-UPA-75-2

Purity: 96%

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

Storage Condition: -20°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
Elemental Analysis	Conforms	%C: 12.71, %H: 5.76, %N: 7.96
MS	Conforms to Structure	Conforms
NMR	Conforms to Structure	Conforms
C NMR	Conforms to Structure	Conforms
P NMR	Conforms to Structure	Conforms
Isotopic Purity	>95%	98.8%
Ammonium Content	Report Result	8.76% by Ion Chromatography
Water Content	Report Result	~4.0% based on Elemental Analysis

Additional Information:

Elemental Analysis (Theoretical) %C: 13.56, %H: 5.69, %N: 7.91
Normalized Intensity: $^{13}\text{C}0 = 0.00\%$, $^{13}\text{C}1 = 2.46\%$, $^{13}\text{C}2 = 97.54\%$

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 By	Reviewed By	C of A Approved By	Test Date	Retest Date
Nicole Yip	Toni Rantanen	My Nguyen	11/28/2020	11/26/2027
				