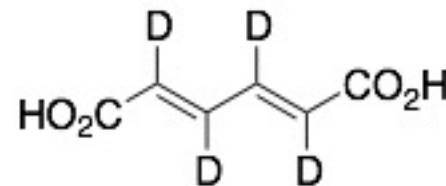


CERTIFICATE OF ANALYSIS**1. Identification**

Catalogue Number M791000 Lot Number 13-DPP-163-1

Product Name
trans,trans-Muconic Acid-d4

StructureSynonyms

Muconic acid-d4, trans,trans-Muconic Acid-d4, trans-trans-Muconic acid-d4, trans,trans-Muconic-d4 Acid, ;(2E,4E)-2,4-Hexadienedioic Acid-d4; (E,E)-Muconic acid-d4; NSC 66486-d4; trans,trans-2,4-Hexadienedioic Acid-d4;

CAS Number

1185239-59-1

Solubility

DMSO (Slightly), Methanol (Slightly, Heated)

Shipping Condition

This Product Is Stable To Be Shipped At Room Temperature

Molecular Formula

C6 H2 D4 O4

Source of Product

Synthetic

Long Term Storage Conditions

-20°C

Molecular Weight

146.13

Purity

>95%

2. Warnings

Not Determined

3. Analytical Information

<u>Tests</u>	<u>Specifications</u>	<u>Results</u>
Appearance	White to Brown Solid	Pale Brown Solid
NMR	Conforms to Structure	Conforms
HPLC Purity	>95%	99.34% (265 nm)
MS	Conforms to Structure	Conforms
Isotopic Purity	>95%	98.2%

Additional Information

Normalized Intensity: $d_0 = 0.02\%$, $d_1 = 0.04\%$, $d_2 = 1.20\%$, $d_3 = 4.76\%$, $d_4 = 93.99\%$

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

<u>Reviewed by</u>	<u>Reviewed by</u>	<u>C of A Approved by</u>	<u>Test Date</u>	<u>Retest Date</u>
			4/18/2023	4/16/2030

Sarjeet Kaur
Product Quality Specialist

Toni Rantanen
Manager, Quality Assurance

Chanell Chu
Jr. Quality Assurance