

Certificate of Analysis

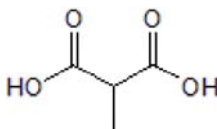
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Product Name: Methylmalonate
CAS Number: 516-05-2
IUPAC Name: 2-Methylpropanedioic acid

Catalog No.: 4979 **Batch No.:** 2
EC Number: 208-219-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄H₆O₄
Batch Molecular Weight: 118.09
Physical Appearance: White solid
Solubility: 1.1eq. NaOH to 100 mM
DMSO to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

GC: Shows 98.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon Hydrogen Nitrogen	
Theoretical	40.68	5.12
Found	40.64	5.08

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Product Name: Methylmalonate

Catalog No.: 4979

2

CAS Number: 516-05-2

EC Number: 208-219-5

IUPAC Name: 2-Methylpropanedioic acid

Description:

Methylmalonate is an intracellularly produced malonate, a reversible succinate dehydrogenase inhibitor used to generate Huntington's disease models. Induces apoptotic cell death in striatal neurons.

Physical and Chemical Properties:

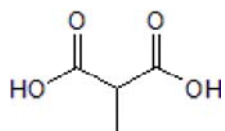
Batch Molecular Formula: C₄H₆O₄

Batch Molecular Weight: 118.09

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

1.1eq. NaOH to 100 mM

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Ehrlich (2012) Huntington's disease and the striatal medium spiny neuron: cell-autonomous and non-cell-autonomous mechanisms of disease. *Neurotherapeutics* **9** 270. PMID: 22441874.

Beal and Ferrante (2004) Experimental therapeutics in transgenic mouse models of Huntington's disease. *Nat.Rev.Neurosci.* **5** 373. PMID: 15100720.

McLaughlin et al (1998) Methylmalonate toxicity in primary neuronal cultures. *Neuroscience* **86** 279. PMID: 9692761.

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