

Certificate of Analysis

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Product Name: Piracetam

Catalog No.: 2973

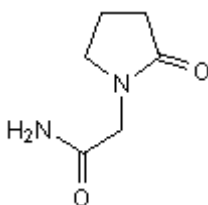
Batch No.: 1

CAS Number: 7491-74-9

IUPAC Name: 2-Oxo-1-pyrrolidineacetamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₁₀N₂O₂
Batch Molecular Weight: 142.16
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 50.69 | | 19.71 |
| Found | 50.39 | | 19.7 |

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

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Description:

Nootropic that displays cognitive enhancing properties. Proposed to enhance neurotransmission via modulation of ion flux; potentiates Na⁺ influx through AMPA receptors. Facilitates efficiency of cholinergic neurotransmission at muscarinic receptors.

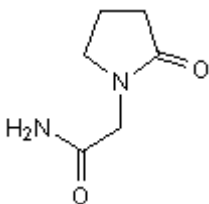
Physical and Chemical Properties:

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References:

Vernon and Sorkin (1991) Piracetam. An overview of its pharmacological properties and a review of its therapeutic use in senile cognitive disorders. *Drugs Aging*. **1** 17. PMID: 1794001.

Gouliaev and Senning (1994) Piracetam and other structurally related nootropics. *Brain Res. Brain Res. Rev.* **19** 180. PMID: 8061686.

Winbald (2005) Piracetam: a review of pharmacological properties and clinical uses. *CNS Drug Rev.* **11** 169. PMID: 16007238.

Storage: Store at RT

Solubility & Usage Info:

water 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.

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