

# PRODUCT INFORMATION



## 1-Methyl-1,4-dihydronicotinamide

Item No. 23226

CAS Registry No.: 17750-23-1

Formal Name: 1,4-dihydro-1-methyl-3-pyridinecarboxamide

MF: C<sub>7</sub>H<sub>10</sub>N<sub>2</sub>O

FW: 138.2

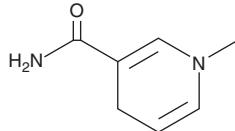
Purity: ≥90%

UV/Vis.:  $\lambda_{\text{max}}$ : 356 nm

Supplied as: A crystalline solid

Storage: -80°C

Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

1-Methyl-1,4-dihydronicotinamide is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-methyl-1,4-dihydronicotinamide in the solvent of choice. 1-Methyl-1,4-dihydronicotinamide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 1-methyl-1,4-dihydronicotinamide in ethanol is approximately 2.5 mg/ml and approximately 15 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 1-methyl-1,4-dihydronicotinamide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 1-methyl-1,4-dihydronicotinamide in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

1-Methyl-1,4-dihydronicotinamide is a derivative of nicotinamide (Item No. 11127).<sup>1</sup> It inhibits β-elimination activity of human serine racemase (hSR; IC<sub>50</sub> = 177 μM) through binding to an allosteric and hydrophobic site on the enzyme.

### Reference

1. Bruno, S., Marchesani, F., Dellafiora, L., et al. Human serine racemase is allosterically modulated by NADH and reduced nicotinamide derivatives. *Biochem. J.* **473**(20), 3505-3516 (2016).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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