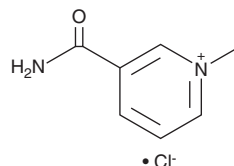


PRODUCT INFORMATION

1-Methylnicotinamide (chloride)

Item No. 16604

CAS Registry No.: 1005-24-9
Formal Name: 3-(aminocarbonyl)-1-methylpyridinium, monochloride
Synonyms: N¹-Methylnicotinamide chloride, MNA, Nicotinamide methochloride, Trigonellamide chloride
MF: C₇H₉N₂O • Cl
FW: 172.6
Purity: ≥95%
UV/Vis.: λ_{max}: 266 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

1-Methylnicotinamide (chloride) is supplied as a crystalline solid. Aqueous solutions of 1-methylnicotinamide (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 1-methylnicotinamide (chloride) 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-Methylnicotinamide is an active metabolite of nicotinamide (Item No. 11127).¹ It is formed from nicotinamide by nicotinamide N-methyltransferase. 1-Methylnicotinamide induces nitric oxide secretion from human umbilical vein endothelial cells (HUVECs) in a concentration-dependent manner.² It increases plasma levels of 6-keto-prostaglandin F_{1α} (Item No.) in rats when administered at a dose of 30 mg/kg and inhibits collagen-induced thrombus formation in rats at the same dose.³

References

1. Alston, T.A. and Abeles, R.H. Substrate specificity of nicotinamide methyltransferase isolated from porcine liver. *Arch. Biochem. Biophys.* **260**(2), 601-608 (1988).
2. Domagala, T.B., Szeffler, A., Dobrucki, L.W., *et al.* Nitric oxide production and endothelium-dependent vasorelaxation ameliorated by N¹-methylnicotinamide in human blood vessels. *Hypertension* **59**(4), 825-832 (2012).
3. Chlopicki, S., Swies, J., Mogielnicki, A., *et al.* 1-Methylnicotinamide (MNA), a primary metabolite of nicotinamide, exerts anti-thrombotic activity mediated by a cyclooxygenase-2/prostacyclin pathway. *Br. J. Pharmacol.* **152**(2), 230-239 (2007).

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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