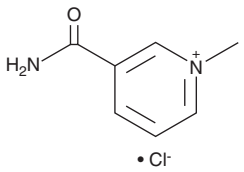
PRODUCT INFORMATION

1-Methylnicotinamide (chloride)

Item No. 16604

CAS Registry No.: 1005-24-9
Formal Name: 3-(aminocarbonyl)-1-methyl-pyridinium, monochloride
Synonyms: N^1-Methylnicotinamide chloride, MNA, Nicotinamide methochloride, Trigonellamide chloride
MF: $C_7H_9N_2O \bullet Cl$
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 F1α (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 N^1-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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM