

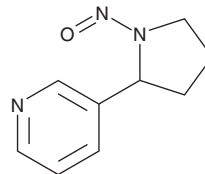
PRODUCT INFORMATION



N'-Nitrosonornicotine

Item No. 34120

CAS Registry No.: 80508-23-2
Formal Name: 3-(1-nitroso-2-pyrrolidinyl)-pyridine
Synonym: NNN
MF: $C_9H_{11}N_3O$
FW: 177.2
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Synthetic



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

Laboratory Procedures

N'-Nitrosonornicotine is supplied as a solid. A stock solution may be made by dissolving the N'-nitrosonornicotine in the solvent of choice, which should be purged with an inert gas. N'-Nitrosonornicotine is slightly soluble in methanol and chloroform.

Description

N'-Nitrosonornicotine is a tobacco-specific N-nitrosamine and carcinogen that has been found in unburned tobacco and cigarette smoke.¹ It induces the formation of DNA adducts in isolated rat nasal mucosa and esophagus. N'-Nitrosonornicotine induces tumor formation in rat esophagus and nasal cavity, mouse lung, forestomach, and trachea, and hamster trachea and forebrain. Urinary levels of N'-nitrosonornicotine are positively correlated with the risk of esophageal cancer in smokers.²

References

1. Hecht, S.S. Biochemistry, biology, and carcinogenicity of tobacco-specific N-nitrosamines. *Chem. Res. Toxicol.* **11**(6), 559-603 (1998).
2. Yuan, J.-M., Knezevich, A.D., Wang, R., *et al.* Urinary levels of the tobacco-specific carcinogen N'-nitrosonornicotine and its glucuronide are strongly associated with esophageal cancer risk in smokers. *Carcinogenesis* **32**(9), 1366-1371 (2011).

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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