

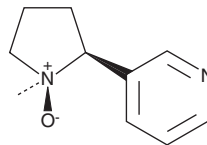
# PRODUCT INFORMATION



## (1'S,2'S)-Nicotine-1'-oxide

Item No. 16413

**CAS Registry No.:** 51095-86-4  
**Formal Name:** 3-[(1S,2S)-1-methyl-1-oxido-2-pyrrolidinyl]-pyridine  
**Synonym:** Nicotine-*cis*-N-oxide  
**MF:** C<sub>10</sub>H<sub>14</sub>N<sub>2</sub>O  
**FW:** 178.2  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 260 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'S,2'S)-Nicotine-1'-oxide is supplied as a crystalline solid. A stock solution may be made by dissolving the (1'S,2'S)-nicotine-1'-oxide in the solvent of choice, which should be purged with an inert gas. (1'S,2'S)-Nicotine-1'-oxide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (1'S,2'S)-nicotine-1'-oxide in ethanol and DMF is approximately 50 mg/ml and approximately 30 mg/ml in DMSO.

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'S,2'S)-nicotine-1'-oxide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (1'S,2'S)-nicotine-1'-oxide in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

(1'S,2'S)-Nicotine-1'-oxide is a stereoisomer of the naturally occurring nicotine metabolite, nicotine-1'-N-oxide.<sup>1</sup> Nicotine-1'-N-oxide is a potential intermediate in the N-demethylation of nicotine.<sup>2</sup>

### References

1. Maciuk, A., Moaddel, R., Haginaka, J., *et al.* Screening of tobacco smoke condensate for nicotinic acetylcholine receptor ligands using cellular membrane affinity chromatography columns and missing peak chromatography. *J. Pharm. Biomed. Anal.* **48**(2), 238-246 (2008).
2. Sindelar, R.D., Rosazza, J.P., and Barfknecht, C.F. N-demethylation of nicotine and reduction of nicotine-1'-N-oxide by *Microsporium gypseum*. *Appl. Environ. Microbiol.* **38**(5), 836-869 (1979).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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