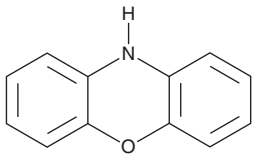
PRODUCT INFORMATION

Phenoxazine

Item No. 29964

CAS Registry No.:	135-67-1
Formal Name:	10H-phenoxazine
Synonym:	NSC 72990
MF:	$C_{12}H_9NO$
FW:	183.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 214, 240, 318 nm
Supplied as:	A 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

Phenoxazine is supplied as a solid. A stock solution may be made by dissolving the phenoxazine in the solvent of choice, which should be purged with an inert gas. Phenoxazine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of phenoxazine in these solvents is approximately 20, 10, and 15 mg/ml, repspectively.

Phenoxazine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, phenoxazine should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Phenoxazine has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Phenoxazine is a heterocyclic building block.[1] It has been used in the synthesis of phenoxazine derivatives that have anticancer and antimicrobial activities *in vitro*.[2-3] Phenoxazine has also been used in the synthesis of phenoxazine derivatives used as chromogenic substrates.[4]

References

1. Shruti, Dwivedi, J., Kishore, D., *et al.* Recent advancement in the synthesis of phenoxazine derivatives and their analogues. *Synthetic Commun.* **48(12)**, 1377-1402 (2018).
2. Shimizu, S., Suzuki, M., Tomoda, A., *et al.* Phenoxazine compounds produced by the reactions with bovine hemoglobin show antimicrobial activity against non-tuberculosis mycobacteria. *Tohoku J. Exp. Med.* **203(1)**, 47-52 (2004).
3. Che, X.-F., Zheng, C.-L., Akiyama, S.-I., *et al.* 2-Aminophenoxazine-3-one and 2-amino-4,4α-dihydro-4α,7-dimethyl-3H-phenoxazine-3-one cause cellular apoptosis by reducing higher intracellular pH in cancer cells. *Proc. Jpn. Acad. Ser. B Phys. Biol. Sci.* **87(4)**, 199-213 (2011).
4. Jana, N.C., Patra, M., Brandão, P., *et al.* Synthesis, structure and diverse coordination chemistry of cobalt(III) complexes derived from a Schiff base ligand and their biomimetic catalytic oxidation of *o*-aminophenols. *Polyhedron* **164**, 23-34 (2019).

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