

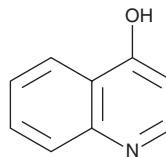
PRODUCT INFORMATION



4-Hydroxyquinoline

Item No. 35064

CAS Registry No.: 611-36-9
Formal Name: 4-quinolinol
Synonyms: Kynurine, NSC 3183, 4-Quinolone
MF: C₉H₇NO
FW: 145.2
Purity: ≥98%
UV/Vis.: λ_{max}: 232, 317, 330 nm
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

4-Hydroxyquinoline is supplied as a solid. A stock solution may be made by dissolving the 4-hydroxyquinoline in the solvent of choice, which should be purged with an inert gas. 4-Hydroxyquinoline is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 4-hydroxyquinoline in ethanol and DMSO is approximately 5 mg/ml and approximately 2 mg/ml in DMF.

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 4-hydroxyquinoline can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 4-hydroxyquinoline in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

4-Hydroxyquinoline is a quinoline alkaloid that has been found in *Z. lotus* honeys.¹ It is a core component of alkyl-4-hydroxyquinoline quorum sensing molecules such as 2-heptyl-3-hydroxy-4(1H)-quinolone (Item No. 29186) and 2-nonyl-3-hydroxy-4-quinolone (Item No. 9002699).² 4-Hydroxyquinoline has been used as a precursor in the synthesis of compounds with antibacterial activity.³ It has also been used as a fluorescent detection reagent for iron(III) in bovine liver samples.⁴

References

1. Khallouki, F., Akdad, M., Bouddine, T., *et al.* HPLC-ESI-MS and GC-EI-MS identification and quantitation of polyphenolics and alkaloids in Moroccan jujube honeys. *J. Apic. Sci.* **64(2)**, 287-299 (2020).
2. Heeb, S., Fletcher, M.P., Chhabra, S.R., *et al.* Quinolones: From antibiotics to autoinducers. *FEMS Microbiol. Rev.* **35(2)**, 247-274 (2011).
3. Kayirere, M.-G., Mahamoud, A., Chevalier, J., *et al.* Synthesis and antibacterial activity of new 4-alkoxy, 4-aminoalkyl and 4-alkylthioquinoline derivatives. *Eur. J. Med. Chem.* **33(1)**, 55-63 (1998).
4. Ragos, G.C., Demertzis, M.A., and Issopoulos, P.B. A high-sensitive spectrofluorimetric method for the determination of micromolar concentrations of iron(III) in bovine liver with 4-hydroxyquinoline. *Farmacol.* **53(8-9)**, 611-616 (1998).

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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