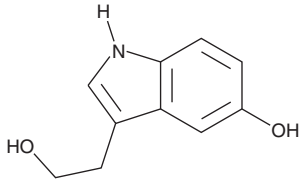
PRODUCT INFORMATION

5-hydroxy Tryptophol

Item No. 16114

CAS Registry No.: 154-02-9
Formal Name: 5-hydroxy-1H-indole-3-ethanol
Synonym: NSC 84416
MF: $C_{10}H_{11}NO_2$
FW: 177.2
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 279 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

5-hydroxy Tryptophol is supplied as a crystalline solid. A stock solution may be made by dissolving the 5-hydroxy tryptopholin the solvent of choice, which should be purged with an inert gas. 5-hydroxy Tryptophol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 5-hydroxy tryptophol in these solvents is approximately 30 mg/ml.

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 5-hydroxy tryptophol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 5-hydroxy tryptophol in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5-hydroxy Tryptophol is a metabolite of tryptophan that is formed by the alcohol dehydrogenase-catalyzed reduction of the serotonin (Item No. 14332) intermediate, 5-hydroxyindoleacetaldehyde.[1-3] Depending on the tissue NAD/NADH ratio, the acetaldehyde intermediate can also be oxidized by aldehyde dehydrogenase to form 5-hydroxyindoleacetic acid.[2,4,5] Thus, a ratio of 5-hydroxy tryptophol to 5-hydroxyindoleacetic acid has been used as a biomarker for recent alcohol consumption.[4,5]

References

1. Yokoyama, M.T. and Carlson, J.R. Dissimilation of tryptophan and related indolic compounds by ruminal microorganisms in vitro. *Appl. Microbiol.* **27(3)**, 540-548 (1974).
2. Pletscher, A. Metabolism, transfer and storage of 5-hydroxytryptamine in blood platelets. *Br. J. Pharmacol. Chemother.* **32(1)**, 1-16 (1968).
3. Curzon, G., Fernando, J.C.R., and Marsden, C.A. 5-Hydroxytryptamine: The effects of impaired synthesis on its metabolism and release in rat. *Br. J. Pharmacol.* **63(4)**, 627-634 (1978).
4. Tekes, K. HPLC determination of serotonin and its metabolites from human platelet-rich plasma; shift to 5-hydroxytryptophol formation following alcohol consumption. *J. Chromatogr. Sci.* **46(2)**, 169-173 (2008).
5. Beck, O., Stephanson, N., Bötthcer, M., *et al.* Biomarkers to disclose recent intake of alcohol: Potential of 5-hydroxytryptophol glucuronide testing using new direct UPLC-tandem MS and ELISA methods. *Alcohol Alcohol.* **42(4)**, 321-325 (2007).

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