

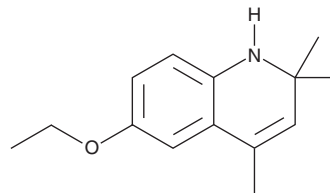
PRODUCT INFORMATION



Ethoxyquin

Item No. 23094

CAS Registry No.: 91-53-2
Formal Name: 6-ethoxy-1,2-dihydro-2,2,4-trimethyl-quinoline
Synonym: NSC 6795
MF: C₁₄H₁₉NO
FW: 217.3
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 357 nm
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Ethoxyquin is supplied as a neat oil. A stock solution may be made by dissolving the ethoxyquin in the solvent of choice, which should be purged with an inert gas. Ethoxyquin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ethoxyquin in these solvents is approximately 30 mg/ml.

Ethoxyquin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ethoxyquin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ethoxyquin has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ethoxyquin is an antioxidant that is widely used in animal feed to protect against lipid peroxidation and fat rancidity in chicken, salmon, and beef.¹ *In vitro*, ethoxyquin protects human lymphocytes against hydrogen peroxide-induced DNA damage and reduces micronuclei formation.² *In vivo*, it reduces the number of chromosome aberrations, micronuclei, and dominant lethal mutations induced by cyclophosphamide (Item No. 13849) in mice, rats, and Chinese hamsters.^{3,4} Ethoxyquin also induces chromosome aberrations such as atypical translocations, breaks, and dicentrics in human lymphocytes and CHO cells as well as *in vivo* kidney and bladder damage in rats.¹ Dietary administration of ethoxyquin (50 and 150 mg/kg, w.w.) increases lipid composition in yellow croaker fish.⁵ Formulations containing ethoxyquin have been used as preservatives in animal feed and in the control of fungi in agriculture.

References

1. Blaszczyk, A., Augustyniak, A., and Skolimowski, J. Ethoxyquin: An antioxidant used in animal feed. *Int. J. Food Sci.* **2013**, 585931 (2013).
2. Blaszczyk, A. and Skolimowski, J. Comparative analysis of cytotoxic, genotoxic and antioxidant effects of 2,2,4,7-tetramethyl-1,2,3,4-tetrahydroquinoline and ethoxyquin on human lymphocytes. *Chem. Biol. Interact.* **162(1)**, 70-80 (2006).
3. Renner, H.W. Antimutagenic effect of an antioxidant in mammals. *Mutat. Res.* **135(2)**, 125-129 (1984).
4. Renner, H.W. and Knoll, M. Antimutagenic effects on male germ cells of mice. *Mutat. Res.* **140(2-3)**, 127-129 (1984).
5. Wang, J., Ai, Q., Mai, K., *et al.* Effects of dietary ethoxyquin on growth performance and body composition of large yellow croaker *Pseudosciaena crocea*. *Aquaculture* **306(1-4)**, 80-84 (2010).

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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