

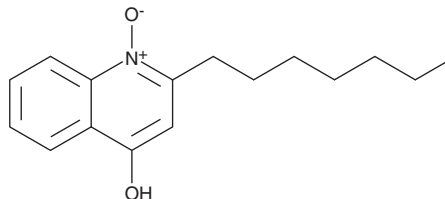
# PRODUCT INFORMATION



## HQNO

Item No. 15159

**CAS Registry No.:** 341-88-8  
**Formal Name:** 2-heptyl-4-quinolinol 1-oxide  
**Synonyms:** KF8940, N-oxo-2-heptyl-4-Hydroxyquinoline, Pyo II  
**MF:** C<sub>16</sub>H<sub>21</sub>NO<sub>2</sub>  
**FW:** 259.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 214, 242, 330 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

HQNO is supplied as a crystalline solid. A stock solution may be made by dissolving the HQNO in the solvent of choice, which should be purged with an inert gas. HQNO is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of HQNO in these solvents is approximately 3, 1, and 0.5 mg/ml, respectively.

HQNO is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HQNO should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. HQNO 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

HQNO is an inhibitor of the respiratory chain binding to the mitochondrial cytochrome b protein, a component of complex III.<sup>1</sup> In *Vibrio alginolyticus*, HQNO blocks 90% the activity of the sodium transporting NADH oxidase at a concentration of 40 μM.<sup>2</sup> It is a useful tool for probing the mechanisms of electron transfer and proton or sodium translocation by the respiratory chain.

### References

1. Van Ark, G. and Berden, J.A. Binding of HQNO to beef-heart sub-mitochondrial particles. *Biochim. Biophys. Acta.* **459(1)**, 119-127 (1977).
2. Tokuda, H. and Unemoto, T. Na<sup>+</sup> is translocated at NADH:quinone oxidoreductase segment in the respiratory chain of *Vibrio alginolyticus*. *J. Biol. Chem.* **259(12)**, 7785-7790 (1984).

#### 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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