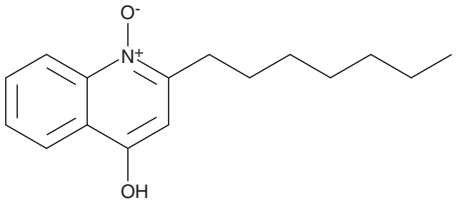
PRODUCT INFORMATION

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:	$C_{16}H_{21}NO_2$
FW:	259.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 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.[1] In *Vibrio alginolyticus*, HQNO blocks 90% the activity of the sodium transporting NADH oxidase at a concentration of 40 µM.[2] 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^+ is translocated at NADH:quinone oxidoreductase segment in the respiratory chain of *Vibrio alginolyticus*. *J. Biol. Chem.* **259(12)**, 7785-7790 (1984).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM