

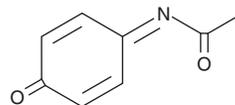
PRODUCT INFORMATION



N-Acetyl-4-benzoquinone imine

Item No. 16115

CAS Registry No.: 50700-49-7
Formal Name: N-(4-oxo-2,5-cyclohexadien-1-ylidene)-acetamide
Synonyms: NAPQI, N-Acetyl-*p*-benzoquinonimine
MF: C₈H₇NO₂
FW: 149.2
Purity: ≥90%
UV/Vis.: λ_{max}: 260 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

N-Acetyl-4-benzoquinone imine (NAPQI) is supplied as a crystalline solid. A stock solution may be made by dissolving the NAPQI in the solvent of choice, which should be purged with an inert gas. NAPQI is soluble in organic solvents such as chloroform (with gentle heat), ether, ethyl acetate, and a 1:1 solution of chloroform and ethyl acetate. The solubility of NAPQI in these solvents is approximately 1 mg/ml.

Description

NAPQI is a cytochrome P450 3A4 and 2E1 metabolite of acetaminophen that can be toxic to the liver when acetaminophen is consumed in large doses.¹ At therapeutic doses of acetaminophen, NAPQI is inactivated by conjugation with glutathione. However, following toxic doses of acetaminophen, available liver reserves of glutathione are quickly depleted due to clearance of excess NAPQI, which enables hepatic proteins to become covalently modified by reactive metabolites and eventually results in hepatocyte necrosis.¹

Reference

1. Qiu, Y., Benet, L.Z., and Burlingame, A.L. Identification of the hepatic protein targets of reactive metabolites of acetaminophen *in vivo* in mice using two-dimensional gel electrophoresis and mass spectrometry. *J. Biol. Chem.* **273**(28), 17940-17953 (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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