

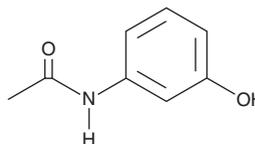
PRODUCT INFORMATION



Metacetamol

Item No. 33404

CAS Registry No.: 621-42-1
Formal Name: N-(3-hydroxyphenyl)-acetamide
Synonyms: AMAP, N-acetyl-*m*-Aminophenol, N-acetyl-*meta*-Aminophenol, 3'-Hydroxyacetanilide, NSC 3990
MF: C₈H₉NO₂
FW: 151.2
Purity: ≥98%
UV/Vis.: λ_{max}: 246 nm
Supplied as: A 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

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

Metacetamol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, metacetamol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Metacetamol has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Metacetamol is a derivative of acetaminophen (Item No. 10024).¹⁻³ Unlike acetaminophen, metacetamol is not cytotoxic to isolated mouse hepatocytes (LC₅₀ = >10 mM).² However, it does induce necrosis and depletion of glutathione (GSH) in isolated human hepatocytes when used at a concentration of 10 mM.¹ Metacetamol (900 mg/kg) does not induce hepatic necrosis in mice.³

References

1. Xie, Y., McGill, M.R., Du, K., *et al.* Mitochondrial protein adducts formation and mitochondrial dysfunction during N-acetyl-*m*-aminophenol (AMAP)-induced hepatotoxicity in primary human hepatocytes. *Toxicol. Appl. Pharmacol.* **289(2)**, 213-222 (2015).
2. Holme, J.A., Hongslo, J.K., Bjørge, C., *et al.* Comparative cytotoxic effects of acetaminophen (N-acetyl-*p*-aminophenol), a non-hepatotoxic regioisomer acetyl-*m*-aminophenol and their postulated reactive hydroquinone and quinone metabolites in monolayer cultures of mouse hepatocytes. *Biochem. Pharmacol.* **42(5)**, 1137-1142 (1991).
3. Nelson, E.B. The pharmacology and toxicology of meta-substituted acetanilide I: Acute toxicity of 3-hydroxyacetanilide in mice. *Res. Commun. Chem. Pathol. Pharmacol.* **28(3)**, 447-456 (1980).

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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