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ProductInformation

4-Nitrophenyl acetate

Product Number **N 8130**
Storage Temperature -0 °C

Product Description

Molecular Formula: $C_8H_7NO_4$
Molecular Weight: 181.1
CAS Number: 830-03-5
Melting point: 78 °C
Synonyms: p-nitrophenyl acetate, acetic acid p-nitrophenyl ester, p-acetoxynitrobenzene

p-Nitrophenyl acetate is a substrate that has been used in assays for esterase and lipase activity.[1-4] The hydrolysis of p-nitrophenyl acetate releases p-nitrophenol, and the absorbance may be monitored at 405 nm. A microplate screening method for hydrolase activity that incorporates p-nitrophenyl acetate in the assay has been published.[5]

Inorganic complexes have been evaluated for their methanolysis or hydrolysis activity using p-nitrophenyl acetate.[6,7] Polymeric surfactant catalysts, which mimic glutathione transferase activity and perform thiolysis of p-nitrophenyl acetate, have been synthesized.[8]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in ethanol (100 mg/ml), with heat as needed, yielding a clear, light yellow to yellow solution. Lower concentration stock solutions can be prepared to avoid potential decomposition of the material, producing free p-nitrophenol.

Storage/Stability

For use as a substrate to determine esterase or lipase activity, 63 mg is dissolved in 10 ml of methanol and stored at 2-8 °C. Such stock solutions can be kept for about one week with only a small increase in free p-nitrophenol. 1 ml of this solution is slowly added to 100 mL of distilled water with strong agitation to prevent precipitation. The aqueous solution must be freshly prepared each day.[1]

References

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8. Svensson, R., et al., Characterisation of polymeric surfactants that are glutathione transferase mimics. Toxicology, **168(3)**, 251-258 (2001).

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