

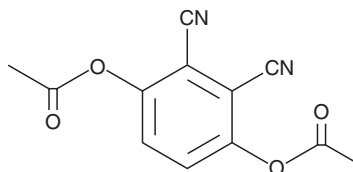
PRODUCT INFORMATION



3,6-diacetoxy Phthalonitrile

Item No. 17409

CAS Registry No.: 83619-73-2
Formal Name: 3,6-bis(acetyloxy)-1,2-benzenedicarbonitrile
Synonyms: ADB, 1,4-Diacetoxy-2,3-dicyanobenzene, 2,3-Dicyano-1,4-hydroquinone diacetate
MF: C₁₂H₈N₂O₄
FW: 244.2
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 305 nm
Ex./Em. Max: 351/450-476 (pH 5.0-10.0) 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

3,6-diacetoxy Phthalonitrile is supplied as a crystalline solid. A stock solution may be made by dissolving the 3,6-diacetoxy phthalonitrile in the solvent of choice, which should be purged with an inert gas. 3,6-diacetoxy Phthalonitrile is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 3,6-diacetoxy phthalonitrile in these solvents is approximately 30 mg/ml.

3,6-diacetoxy Phthalonitrile is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3,6-diacetoxy phthalonitrile should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 3,6-diacetoxy Phthalonitrile has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

3,6-diacetoxy Phthalonitrile is a fluorescent probe for monitoring intracellular pH by flow cytometry in living cells.¹ It rapidly crosses cell membranes and is cleaved by cytosolic esterases to form the fluorescent pH indicator 2,3-dicyano-hydroquinone (DCH), which is excited at UV wavelengths. DCH can be excited at 351 nm, with pH-dependent emission in the range of 450-476 nm (pH 5.0-10.0) using a potassium-based buffer.¹

Reference

1. Cook, J.A. and Fox, M.H. Intracellular pH measurements using flow cytometry with 1,4-diacetoxy-2,3-dicyanobenzene. *Cytometry* **9**(5), 441-447 (1988).

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.

WARRANTY AND LIMITATION OF REMEDY

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