

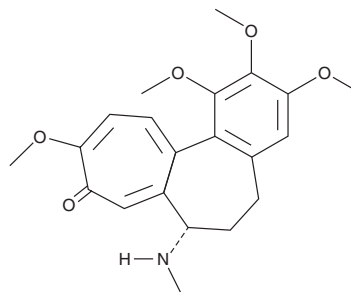
PRODUCT INFORMATION



Colcemid

Item No. 15364

CAS Registry No.: 477-30-5
Formal Name: (7S)-6,7-dihydro-1,2,3,10-tetramethoxy-7-(methylamino)-benzo[a]heptalen-9(5H)-one
Synonyms: Demecolcine, NSC 3096
MF: C₂₁H₂₅NO₅
FW: 371.4
Purity: ≥98%
UV/Vis.: λ_{max}: 242, 348, 352 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Protect from light and moisture



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Colcemid is supplied as a crystalline solid. A stock solution may be made by dissolving the colcemid in the solvent of choice, which should be purged with an inert gas. Colcemid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of colcemid in ethanol is approximately 30 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of colcemid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of colcemid in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Colcemid is a colchicine (Item No. 9000760) derivative that inhibits tubulin polymerization as potently as colchicine (IC₅₀ = 2.1 and 2.4 μM, respectively) but is less toxic.¹⁻³ At very low (nanomolar) concentrations, colcemid suppresses microtubule dynamicity and inhibits cell migration, while at micromolar levels it blocks microtubule assembly, arresting cells in metaphase.³⁻⁵ Mitotic block by colcemid is used to synchronize cells and for karyotyping in cytogenetic studies.^{4,6} Prolonged exposure to colcemid can activate p53, leading to apoptosis.⁷

References

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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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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