3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Cyclophosphamide monohydrate

Product Number **C 7397**
Storage Temperature 2-8 °C

Product Description

Molecular Formula: $C_7H_{15}Cl_2N_2O_2P \bullet H_2O$
Molecular Weight: 279.1
CAS Number: 6055-19-2
Synonym: Cytoxan

Packaged in a 100 ml serum bottle with butyl rubber stopper and aluminum tear seal. Dissolving the contents in 100 ml of solvent yields a 1% solution. Injecting a compatible solvent directly into the vial permits preparation of any desired strength solution without exposure.

This product is an alkylating, antineoplastic agent, which is converted in the body to an active alkylating metabolite (4-hydroxycyclophosphamide). It possesses marked immunosuppressant properties.[1] The dosage of cyclophosphamide in mice for stimulating cell-mediated immunity is 10 mg/kg.[2] It has been used for induction chemotherapy to study predictive and prognostic values of tumor MGMT gene expression,[3] to study its effects on apoptosis and cell cycle progression,[4] and its cardiotoxicity during pretransplant conditioning in blood stem cell transplantation has been reported.[5]

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (40 mg/ml).[6] It is soluble in water (100 mg/ml) with heat.

Storage/Stability

Solutions break down on storage. Aqueous solutions may be kept for a few hours at temperatures up to 25 °C. At temperatures above 30 °C, hydrolysis occurs with removal of chlorine. A solution of cyclophosphamide reconstituted with water and diluted to 4 mg/ml with 0.9 % sodium chloride solution lost about 3.5% potency in 24 hours and 11.9% in one week when stored at 25 °C. When protected from light and stored at 5 °C the loss was 0.55% after 1 week and 1% after 4 weeks.[7] An equation for calculating potency at any time during storage has been reported.[8]

References

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