Thio-TEPA
Item No. 23745

CAS Registry No.: 52-24-4
Formal Name: 1,1',1''-phosphinothioiyldinetris-aziridine
Synonyms: NCI C01649, NSC 6396,
Triethylenetriphosphoramide
MF: C₆H₁₂N₃PS
FW: 189.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

Thio-TEPA is supplied as a solid. A stock solution may be made by dissolving the thio-TEPA in the solvent of choice. Thio-TEPA is soluble in the organic solvent dichloromethane, which should be purged with an inert gas.

Description

Thio-TEPA is an alkylating agent with anticancer activity (IC₅₀ = 1.5 μM against P388 murine leukemia cells).¹ It alkylates DNA and inhibits thymidine incorporation (IC₅₀ = 2 μM) inducing irreversible DNA damage. Thio-TEPA crosslinks guanine nucleotides and induces cell cycle arrest via the formation of interstrand crosslinks in L1210 and MCF-7 cancer cells in vitro.² In vivo, thio-TEPA reduces the number of pulmonary metastases in mice following subcutaneous injection of melanoma cells.³ It also decreases the number of postoperative lung metastases when administered at a dose of 10 mg/kg after surgical removal of an S-91 melanoma tumor established via intramuscular injection in mice.

References