

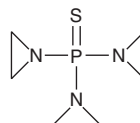
# PRODUCT INFORMATION



## Thio-TEPA

Item No. 23745

CAS Registry No.: 52-24-4  
Formal Name: 1,1',1''-phosphinothiodylidynetris-aziridine  
Synonyms: NCI C01649, NSC 6396,  
Triethylenethiophosphoramidate  
MF:  $C_6H_{12}N_3PS$   
FW: 189.2  
Purity:  $\geq 98\%$   
Supplied as: A solid  
Storage:  $-20^\circ C$   
Stability:  $\geq 4$  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, which should be purged with an inert gas. Thio-TEPA is soluble in the organic solvent dichloromethane.

### Description

Thio-TEPA is an alkylating agent with anticancer activity ( $IC_{50} = 1.5 \mu M$  against P388 murine leukemia cells).<sup>1</sup> It alkylates DNA and inhibits thymidine incorporation ( $IC_{50} = 2 \mu M$ ) 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*.<sup>2</sup> *In vivo*, thio-TEPA reduces the number of pulmonary metastases in mice following subcutaneous injection of melanoma cells.<sup>3</sup> 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

1. Miller, B., Tenenholz, T., Egorin, M.J., *et al.* Cellular pharmacology of N,N',N''-triethylene thiophosphoramidate. *Cancer Lett.* **41(2)**, 157-168 (1988).
2. Maanen, M.J., Smeets, C.J., and Beijnen, J.H. Chemistry, pharmacology and pharmacokinetics of N,N',N''-triethylenethiophosphoramidate (ThioTEPA). *Cancer Treat. Rev.* **26(4)**, 257-268 (2000).
3. Kramer, W.M. and Schatten, W.E. An experimental study of triethylenethiophosphoramidate (TSPA) in the prevention of postoperative pulmonary metastases. *Cancer* **11(3)**, 463-465 (1958).

#### 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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