

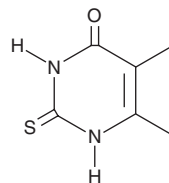
# PRODUCT INFORMATION



## 5,6-dimethyl-2-Thiouracil

Item No. 29821

**CAS Registry No.:** 28456-54-4  
**Formal Name:** 2,3-dihydro-5,6-dimethyl-2-thioxo-4(1H)-pyrimidinone  
**Synonyms:** Dimethylthiouracil, NSC 60687  
**MF:** C<sub>6</sub>H<sub>8</sub>N<sub>2</sub>OS  
**FW:** 156.2  
**Purity:** ≥95%  
**Supplied as:** A 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

5,6-dimethyl-2-Thiouracil is supplied as a solid. A stock solution may be made by dissolving the 5,6-dimethyl-2-thiouracil in the solvent of choice, which should be purged with an inert gas. 5,6-dimethyl-2-Thiouracil is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of 5,6-dimethyl-2-thiouracil in these solvents is approximately 10 and 15 mg/ml, respectively.

5,6-dimethyl-2-Thiouracil is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 5,6-dimethyl-2-thiouracil should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 5,6-dimethyl-2-Thiouracil has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

5,6-dimethyl-2-Thiouracil is a heterocyclic building block that has been used in the synthesis of anti-HIV-1 pyrimidinones.<sup>1</sup> It has also been used as an internal standard for the quantification of thyreostats, including 2-thiouracil, in bovine plasma.<sup>2</sup>

### References

1. Navrotskii, M.B. Synthesis and anti-HIV-1 activity of new 2-[(2-phthalimidoethyl)thio]-4(3H)-pyrimidinone derivatives. *Pharm. Chem. J.* **39(9)**, 466-467 (2005).
2. Schmidt, K.S. In-house validation and factorial effect analysis of a liquid chromatography-tandem mass spectrometry method for the determination of thyreostats in bovine blood plasma. *Anal. Bioanal. Chem.* **406(3)**, 735-743 (2014).

#### 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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