

Product Information

DITHIOBIURET

Product Number **D 3190**

Storage Temperature 25 °C

CAS#: 541-53-7

Synonyms: Thioimidodicarbonic diamide;
Dithioallophanimidic acid; 2,4-Dithiobiuret;
Imidodicarbonimidothioic diamide

Product Description

Molecular Formula: C₂H₅N₃S₂

Molecular Weight: 135.2

Dithiobiuret is a paralytic agent, causing delayed-onset neuromuscular weakness in rats.¹ Studies on rat pheochromocytoma (PC12) exposed to dithiobiuret suggests that the product may directly affect the mechanism involved in acetylcholine neurotransmitter release.² Dithiobiuret may also have a general toxicity on particular cell types.³

Precautions and Disclaimer

This product is for laboratory use only.

Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Dithiobiuret is soluble in water at 2.7 mg/ml and at 22 mg/g of ethanol. Dithiobiuret is also soluble at 290 g/g of a 10% sodium hydroxide solution.

References

1. Spitsbergen, J.M., et al., The paralytic agent 2,4-dithiobiuret decreases open time of murine skeletal muscle acetylcholine receptor channels. *J Pharmacol Exp Ther.* **272**, 645-51 (1995).
2. Ireland, L.M. et al., Differential effects of 2,4-dithiobiuret on the synthesis and release of acetylcholine and dopamine from rat pheochromocytoma (PC12) cells. *J. Pharmacol. Exp. Ther.*, **275**, 1453 (1995).
3. Rheuben, M.B., et al., Effects of the paralytic agent 2,4-dithiobiuret on viability and morphology of rat pheochromocytoma (PC12) cells. *Neurotoxicology*, **18**, 105 (1997).

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