



LKT Laboratories, Inc.

Theophylline

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Product Information

Product ID T2817

CAS No. 58-55-9

Chemical Name 3,7-Dihydro-1,3-dimethyl-1H-purine-2,6-dione

Synonym Theophylline anhydrous, 1,3-Dimethylxanthine, Diphyllin, Elixicon, Sustaire

Formula C₇H₈N₄O₂

Formula Wt. 180.16

Melting Point 271-273 °C

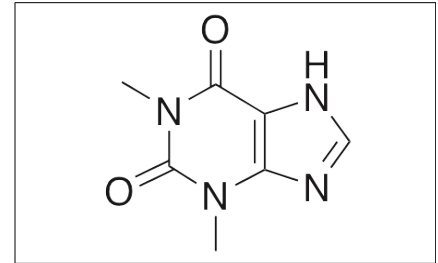
Purity ≥98%

Solubility Slightly soluble in water (4 mg/mL). Soluble in ammonium hydroxide (50 mg/mL), alcohol (10 mg/mL), DMSO (15 mg/mL).

Store Temp Ambient

Ship Temp Ambient

Description Theophylline is a methylxanthine compound that exhibits bronchodilatory, anti-asthma, anti-tussive, and anti-inflammatory activities. Theophylline is clinically used to treat respiratory diseases such as chronic obstructive pulmonary disorder (COPD), asthma, and cough. Theophylline is a nonselective inhibitor of phosphodiesterases (PDEs), increasing cAMP levels and PKA activation; it also inhibits adenosine A1/2 receptors.



Bulk quantities available upon request

Product ID	Size
T2817	100 g
T2817	250 g

References Dubuis E, Wortley MA, Grace MS, et al. Theophylline inhibits the cough reflex through a novel mechanism of action. *J Allergy Clin Immunol.* 2014 Jun;133(6):1588-98. PMID: 24406072.

Barnes PJ. Theophylline. *Am J Respir Crit Care Med.* 2013 Oct 15;188(8):901-6. PMID: 23672674.

Essayan DM. Cyclic nucleotide phosphodiesterases. *J Allergy Clin Immunol.* 2001 Nov;108(5):671-80. PMID: 11692087.

Daly JW, Jacobson KA, Ukena D. Adenosine receptors: development of selective agonists and antagonists. *Prog Clin Biol Res.* 1987;230:41-63. PMID: 3588607.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.