



**LKT Laboratories, Inc.**

**D,L-Homocysteine Thiolactone Hydrochloride**

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## Product Information

**Product ID** H5748

**CAS No.** 6038-19-3

**Chemical Name**

**Synonym** (+-)-Dihydro-3-amino-2(3H)-thiophenone hydrochloride

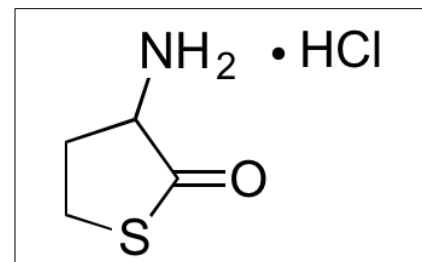
**Formula** C<sub>4</sub>H<sub>7</sub>NOS • HCl

**Formula Wt.** 153.63

**Melting Point** 201-202 °C

**Purity** ≥98%

**Solubility** Soluble in water.



**Bulk quantities available upon request**

Product ID	Size
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H5748	50 g
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H5748	100 g
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**Store Temp** Ambient

**Ship Temp** Ambient

**Description** D,L-Homocysteine thiolactone binds to and induces conformational changes in various plasma proteins. This compound slows coagulation and causes more tightly packed fibrin structure formation; it is detrimental to vascular function and may induce oxidative stress. D,L-Homocysteine thiolactone exhibits cardiomodulatory, epileptogenic, and neurotoxic activities. In isolated hearts, this compound decreases left ventricular systolic blood pressure and cardiac force. In vivo, this compound induces seizures and is thought to play a role in the development of Alzheimer's disease.

**References** Hrnčić D, Rašić-Marković A, Macut D, et al. Homocysteine thiolactone-induced seizures in adult rats are aggravated by inhibition of inducible nitric oxide synthase. *Hum Exp Toxicol.* 2014 May;33(5):496-503. PMID: 23760255.

Genoud V, Lauricella AM, Kordich LC, et al. Impact of homocysteine-thiolactone on plasma fibrin networks. *J Thromb Thrombolysis.* 2014 Mar 23. [Epub ahead of print]. PMID: 24659173.

Zivkovic V, Jakovljevic V, Pechanova O, et al. Effects of DL-homocysteine thiolactone on cardiac contractility, coronary flow, and oxidative stress markers in the isolated rat heart: the role of different neurotransmitters. *Biomed Res Int.* 2013;2013:318471. PMID: 24350259.

Borowczyk K, Shih DM, Jakubowski H. Metabolism and neurotoxicity of homocysteine thiolactone in mice: evidence for a protective role of paraoxonase 1. *J Alzheimers Dis.* 2012;30(2):225-31. PMID: 22406444.

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