

Allicin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Allicin

Catalog No.: CFN90201

Cas No.: 539-86-6

Purity: > 98%

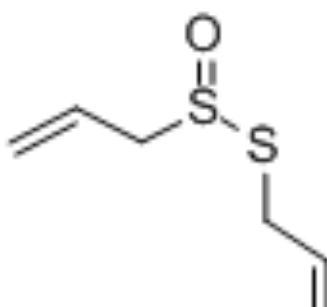
M.F: C₆H₁₂S₂O

M.W: 162.27

Physical Description: Oil

Synonyms:

2-Propene-1-sulfinothioicacid,s-2-propenylester;Alliosan;Allylthiosulphinicacidallylester;
Diallyldisulfid-S-oxide;diallylthiosulfinate;thio-2-propene-1-sulfinicacids-allylester;thio-2-propene-1-sulfinicacis-allylester.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

[Source]

The bulb of *Allium sativum* L.

[Biological Activity or Inhibitors]

Allicin, one of the active principles of freshly crushed garlic homogenates, has a variety of antimicrobial activities, including antibacterial, antifungal, antiviral, and, antiparasitic activities; the main antimicrobial effect of allicin is due to its chemical reaction with thiol groups of various enzymes, e.g. alcohol dehydrogenase, thioredoxin reductase, and RNA polymerase, which can affect essential metabolism of cysteine proteinase activity involved in the virulence of *E. histolytica*.^[1]

Allicin has antiproliferative effects, it can inhibit the growth of cancer cells of murine and human origin, induce the formation of apoptotic bodies, nuclear condensation and a typical DNA ladder in cancer cells. ^[2]

Allicin from garlic powder is beneficial in reducing blood cholesterol, triglycerides levels and systolic blood pressure in hypercholesterolemic rats, it may beneficially affect two risk factors for atherosclerosis – hyperlipidemia and hypertension. ^[3]

Allicin exhibits antioxidant activities as protective compounds against free radical damage.^[4]

Allicin can strongly inhibit cysteine proteinases and cytopathic effects of *Entamoeba histolytica*.^[5]

Allicin is an anti-inflammatory agent, it exerts an inhibitory immunomodulatory effect on intestinal epithelial cells and suggest that allicin may have the potential to attenuate intestinal inflammation.^[6]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[7]

Mobile phase: Methanol -0.4% Carboxylic acid =65:35 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 242 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

- [1] Ankri S, Mirelman D. *Microbes & Infection*, 1999, 1(2):125-9.
- [2] Oommen S, Anto R J, Srinivas G, *et al. Eur. J.Pharmacol.*, 2004, 485(1-3):97-103.
- [3] Ali M, Al-Qattan K K, Al-Enezi F, *et al. Prostag. Leukotr. Ess.*, 2000, 62(4):253-9.
- [4] Chung L Y. *J. Med. Food*, 2006, 9(2):205-13.
- [5] Ankri S, Miron T, Rabinkov A, *et al. Antimicrob. Agents Ch.*, 1997, 41(10):2286-8.
- [6] Lang A, Lahav M, Sakhnini E, *et al. Clin. Nutr.*, 2004, 23(5):1199-208.
- [7] Liang Y, Zhang J J, Zhang Q B, *et al. J. Pharmaceut. Anal.*, 2013, 3(3):187-92.

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