

Ergocalciferol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Ergocalciferol

Catalog No.: CFN90049

Cas No.: 50-14-6

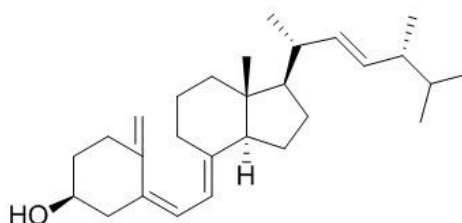
Purity: >=99%

M.F: C₂₈H₄₄O

M.W: 396.65

Physical Description: Powder

Synonyms: VitaminD2;(3S,5Z,7E,22E)-9,10-secoergosta-5,7,10,22-tetraen-3-ol;
(3S,5Z,7E,14xi,17alpha,22E)-9,10-secoergosta-5,7,10,22-tetraen-3-ol;(7E)-9,10-secoergosta-5,7,10,22-tetraen-3-ol; (3S,5Z,7E,17xi,22E)-9,10-secoergosta-5,7,10,22-tetraen-3-ol;
(3S,22E)-9,10-secoergosta-5,7,10,22-tetraen-3-ol.



[Intended Use]

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

[Source]

From the edible mushroom *Cantharelluscibarius* (*chanterelle*).

[Biological Activity or Inhibitors]

Calcium ions, cholesterol and ergocalciferol can reverse the antibacterial activities of lauric and linoleic acids but magnesium ions effectively counteracts lauric acid only.^[1]

Ergocalciferol can cause HL-60 apoptosis via a modulation of mitochondria involving ROS production, GSH depletion, caspase activation, and Fas induction, on the basis of anticancer activity of ergocalciferol, it may be feasible to develop chemopreventive agents from edible mushrooms or hop.^[2]

Therapy with cyclical etidronate plus ergocalciferol can not only prevent glucocorticoid-induced bone loss, but even increase lumbar spine and femoral neck bone mineral densities (BMD) in postmenopausal women commencing glucocorticoid therapy.^[3]

Elderly patients with Alzheimer disease (AD) hypovitaminosis D are at increased risk for hip fracture, treatment with risedronate and ergocalciferol may be safe and effective in reducing the risk of a fracture in elderly patients with AD.^[4]

Ergocalciferol is an effective treatment that delays the development of secondary hyperparathyroidism in children with CKD2-3.^[5]

Ergocalciferol can promote keratinocytes differentiation in the epidermis, topical application of ergocalciferol may become an effective means to suppress solar UV-induced human skin damage.^[6]

[Solvent]

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

[HPLC Method]^[7]

Mobile phase: Acetonitrile - Methanol=90:10 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 265 nm.

[Storage]

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

[References]

- [1] Galbraith H, Miller T B, Paton A M, *et al. J. Appl. Microbiol.*, 1971, 34(4):803-13.
- [2] Chen W J, Huang Y T, Wu M L, *et al. J. Agr. Food Chem.*, 2008, 56(56):2996-3005.
- [3] Diamond T, Mcguigan L, Barbagallo S, *et al. Am. J. Med.*, 1995, 98(5):459-63.
- [4] Sato Y, Kanoko T, Satoh K, *et al. Arch. Intern. Med.*, 2005, 165(15):1737-42.
- [5] Shroff R, Wan M, Gullett A, *et al. Clin. J. Am. Soc. Nephro.*, 2012, 7(2):216-23.
- [6] Mitani H, Naru E, Yamashita M, *et al. Photodermatol. Photo.*, 2004, 20(5):215-23.
- [7] Barba F J, Esteve M J, Frigola A. *Eur. Food Res. Technol.*, 2011, 232(5):829-36.

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