Natural Products

ChemFaces

Marmin Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Marmin

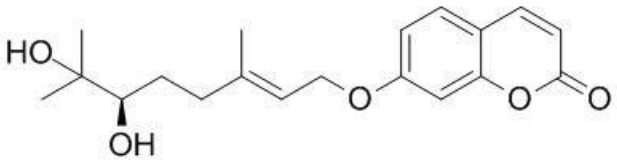
Catalog No.: CFN99621

Cas No.: 14957-38-1

Purity: > 95%

M.F: $C_{19}H_{24}O_5$

M.W: 332.4



Physical Description: Powder

Synonyms:7-[(E,6R)-6,7-dihydroxy-3,7-dimethyloct-2-enoxy]chromen-2-one.

[Intended Use]

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

[Source]

The herbs of *Citrus maxima*.

[Biological Activity or Inhibitors]

Marmin can inhibit contraction of the guinea-pig tracheal smooth muscle, especially by interfering histamine receptor, inhibiting the histamine release from mast, inhibiting intracellular Ca^{2+} release from the intracellular store and the Ca^{2+} influx through voltage-dependent Ca^{2+} channels.[1]

Marmin, skimmianine, aegeline, aurapten, zeorin, and dustanin are potential to develop as antihistamine agents, especially as histamine H1 receptor antagonists by interacting with amino acid residues, Asp107, Lys179, Lys191, Asn198, and Trp428 of histamine H1 receptor.[2]

S-trans-Marmin shows potent antibacterial, fungicidal, and algicidal properties. [3]

Marmin shows a cell-growth inhibitory effect against L1210 and K562 in vitro.[4]

Marmin and nobiletin have anti-ulcer effects, which are ascribed primarily to the maintenance of the mucosal barrier integrity and inhibition of gastric motor activity and secondarily due to the prevention of the effects of endogenous acetylcholine and histamine.[5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: Methanol -H2O,gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 25 ℃;

The wave length of determination:324 nm.

[Storage]

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

[References]

[1] Nugroho A E, Anas Y, Arsito P N, *et al. Pak. J. Pharm. Sci.,2011,24(4):427-33.*

[2] Nugroho AE, Agistia DD, Tegar M, *et al. Bioinformation., 2013, 9(8):383-7.*

[3] Tsassi VB, Hussain H, Meffo BY, *et al. Nat. Prod. Commun.,2010,5(4):559-61.*

[4] Satoh Y, Tashiro S, Satoh M, *et al. Yakugaku Zasshi.,1996,116(3):244-50.*

[5] Takase H, Yamamoto K, Hirano H, *et al. Jpn. J. Pharmacol.,1994,66(1):139-47.*

[6] Li Z H, Chen H F, Luo L P, *et al. Journal of Chinese Medicinal Materials,2013, 36(1):28-31.*

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