Natural Products



5-Isopropyl-2-methylphenol Datasheet

4th Edition (Revised in July, 2016)

OH

[Product Information]

Name: 5-Isopropyl-2-methylphenol

Catalog No.: CFN90491

Cas No.: 499-75-2

Purity: >=98%

M.F: C₁₀H₁₄O

M.W: 150.22

Physical Description: Oil

Synonyms: 1-Hydroxy-2-methyl-5-isopropylbenzene;2-hydroxy-4-(2-propyl)toluene; 2-Hydroxy-1-methyl-4-(1-methylethyl)benzene;2-methyl-5-(1-methylethyl)-pheno;2-hydro xy-p-cymen;2-para-cymenol;2-p-Cymenol;3-isopropyl-6-methyl-pheno;Carvacrol.

[Intended Use]

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

[Source]

The herbs of Elsholtzia ciliata.

[Biological Activity or Inhibitors]

Carvacrol (5-isopropyl-2-methylphenol) is a monoterpenic phenol which is present in the essential oil of oregano and thyme, carvacrol presents antinociceptive activity that may not act through the opioid system nor through inhibition of the nitric oxide pathway.^[1] Carvacrol presents anxiolytic effects in the plus maze test which are not influenced by the locomotor activity in the open-field test.^[2]

Carvacrol presents antidepressant effects in the forced swimming and tail suspension tests; this effect seems to be dependent on its interaction with the dopaminergic system, but not with the serotonergic and noradrenergic systems. ^[3]

Carvacrol has good insecticidal activity against Aphis craccivora, its median lethal concentration(LC50)(24 h after treatment) is 16.8 mg/ L.^[4]

2-Isopropyl-5-methylphenol and its structural analogs show antibacterial activity against food-borne bacteria, thus, they should be useful as natural food preservatives.^[5]

2-Isopropyl-5-methylphenol has significant antitumor activity, therefore, it may be considered as an effective anticancer drug delivery system for cancer chemotherapy.^[6] Carvacrol has antifungal activity, provides relatively good control against these plant pathogenic fungi, mycelial growth of and was inhibited at 50 ug/mL and above.^[7]

[Solvent]

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

[HPLC Method]^[8]

Mobile phase: Methanol-H2O-Acetic acid =60:40:2 ; Flow rate: 1.0 ml/min; Column temperature: Room Temperature; The wave length of determination: 274 nm.

[Storage]

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

[References]

[1] Melo F H C, Rios E R V, Rocha N F M, *et al. J. Pharm. Pharmacol., 2012, 64(12):* 1722-9.

[2] Melo F H C, Venâncio E T, Sousa D P D, et al. Fund. Clin. Pharmacol., 2009, 24(4): 437-43.

[3] Melo F H C, Moura B A, Sousa D P D, et al. Fund. Clin. Pharmacol., 2011, 25(3):362-7.

[4] Wang L, Chen X H. Chem. Res. Appl., 2010, 22(9):1153-7.

[5] Jeon J H, Park J H, Lee H S.J. Korean Soc. Appl. Bi., 2014, 57(4):485-90.

[6] Rajan B, Sathish S, Jayakumar S, et al. Biomed. Prev. Nutr., 2014, 4(2):137-41.

[7]Numpaque M A, Oviedo L A, Gil J H, et al. Trop.Plant Pathol., 2011,3,15.

[8] Li J I, Fang W, Yan L Y, et al. China Journal of Chinese Materia Medica, 2004, 29(11):1030-2.

[Contact]

Address: S5-3 Building, No. 111, Dongfeng Rd., Wuhan Economic and Technological Development Zone, Wuhan, Hubei 430056, China Email: info@chemfaces.com Tel: +86-27-84237783 Fax: +86-27-84254680 Web: www.chemfaces.com Tech Support: service@chemfaces.com