

Patchouli alcohol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Patchouli alcohol

Catalog No.: CFN98118

Cas No.: 5986-55-0

Purity: > 98%

M.F: C₁₅H₁₆O

M.W: 222.36

Physical Description: Powder

Synonyms:

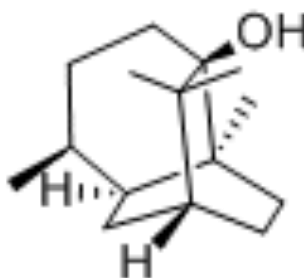
(1R-(1 α ,4 β ,4 α ,6 β ,8 α))-Octahydro-4,8a,9,9-tetramethyl-1,6-methano-1(2H)-naphthol;

1,6-Methanonaphthalen-1(2H)-ol, octahydro-4,8a,9,9-tetramethyl-, (1R,4S,4aS,6R,8aS)-;

(4S,8aS)-4,8a,9,9-Tetramethyloctahydro-1,6-methanonaphthalen-1(2H)-ol;

4,8a,9,9-Tetramethyloctahydro-1,6-methanonaphthalen-1(2H)-ol;

(1R,4S,4aR,6R,8aS)-4,8a,9,9-Tetramethyloctahydro-1,6-methanonaphthalen-1(2H)-ol.



[Intended Use]

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

[**Source**]

The herbs of *Pogostemon cablin* (Blanco) Benth.

[**Biological Activity or Inhibitors**]

Patchouli alcohol, is the main constituent of patchouli oil obtained from *Pogostemon cablin* (Blanco) Benth, has repellency and toxicity against Formosan subterranean termites (*Coptotermes formosanus* Shiraki), unusual tissue destruction was noted inside the exoskeleton of the termite after patchouli alcohol was topically applied to the dorsum.^[1]

Patchouli alcohol is an important anti-inflammatory constituent of *Pogostemonis Herba* and that its anti-inflammatory effect may be mediated, at least in part, by down-regulation of the mRNA expression of a panel of inflammatory mediators, such as TNF- α , IL-1 β , IL-6, iNOS and COX-2.^[2]

Patchouli alcohol does not show anti-influenza virus activity against A/Guizhou/54/89 (H3N2), but shows weak activity against B/Ibaraki/2/85 (IC(50) = 40.82 μ M), it does not show inhibitory activity against influenza virus neuraminidase. ^[3]

Patchouli alcohol has neuroprotective effect and exerts an anti-cancer activity by decreasing cell growth and increasing apoptosis in human colorectal cancer cells, the proposed mechanisms include the inhibition of HDAC2 expression and HDAC enzyme activity, and subsequent downregulation of c-myc and activation of NF- κ B pathway.^[4]

Patchouli alcohol significantly accelerates the recovery of the UV-induced skin lesions, evidently through anti-oxidant and anti-inflammatory action, as well as down-regulation of the MMP-1 and MMP-3 expression.^[5]

Patchouli alcohol exhibits significant gastroprotective effects against gastric ulceration, the underlying mechanisms might involve the stimulation of COX-mediated PGE₂, improvement of antioxidant and anti-inflammatory status, preservation of GBF and NP-SH, as well as boost of gastric mucus production.^[6]

Patchouli alcohol has significant immunomodulatory properties which probably act by

activating mononuclear phagocytic system, augmenting humoral immune response while suppressing cellular immune response.^[7]

Patchouli alcohol has selective antibacterial activity against based on inhibition of urease.^[8]

[Solvent]

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

[GC Method]^[9]

Injector temperature :280°C;

Detector temperature :280°C;

Carrier gas:Nitrogen;

Column flow rate: 1.0 mL / min;

Temperature program: initial column temperature of 150 °C to 230 °C.

[Storage]

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

[References]

[1] Zhu Betty C.-R., Gregg Henderson, Ying Yu, *et al. J.Agr. Food Chem.*, 2003, 51(16):4585-8.

[2] Xian Y F, Li Y C, Ip S P, *et al. Exp. Ther. Med.*, 2011, 2(3):545-50.

[3] Kiyohara H, Ichino C, Kawamura Y, *et al. J. Nat. Med.*, 2012, 66(1):55-61.

[4] Jin B J, Choi J, Lou Z, *et al. Int. Immunopharmacol.*, 2013, 16(2):184-90.

[5] Feng X X, Yu X T, Li W J, *et al. Eur. J. Pharmaceut. Sci.*, 2014, 63:113-23.

[6] Zheng Y F, Xie J H, Xu Y F, *et al. Chem. Biol. Interact.*, 2014, 222:27-36.

[7] Liao J B, Wu D W, Peng S Z, *et al. Trop. J. Pharm. Res.*, 2013, 12(4):559-65.

[8] Yu X D, Xie J H, Wang Y H, *et al. Phytother. Res. Ptr*, 2015, 29(1):67-72.

[9] Zhao X L, Liu Q H, Guo H. *China Pharmacy*, 2010, 21(40):3833-4.

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