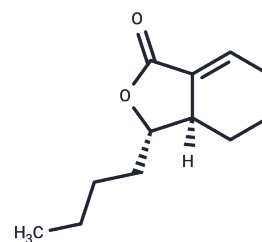


Neocnidilide

Chemical Properties

CAS No. :	4567-33-3
Formula:	C ₁₂ H ₁₈ O ₂
Molecular Weight:	194.27
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Neocnidilide is an alkyl phthalate derived from Rhizoma Ligustici Chuanxiong with the ability to inhibit the growth of mycotoxin-producing fungi and to kill insects. The LC ₅₀ value of Neocnidilide against <i>D. melanogaster</i> larvae was 9.9 μmol/mL. It enhances the skin penetration of benzoic acid. The LC ₅₀ value of Neocnidilide against <i>D. melanogaster</i> larvae was 9.9 μmol/mL. It enhances the skin penetration of benzoic acid.
Targets(IC ₅₀)	Antifungal
In vitro	In this study, the authors compare the composition of the volatile fractions of <i>A. graveolens</i> collected in natural populations in Portugal and Italy and evaluate their potential as antifungal agents. The composition of the volatile oils obtained by hydrodistillation and their antifungal activity are reported. The oils were analysed by gas chromatography-flame ionisation detector and gas chromatography-mass spectrometry methods and their composition were compared with that of the volatile extracts isolated by supercritical CO ₂ . A chemical variability in the extracts depending on the origin of the plants and on the extraction method was observed. The results showed the presence of sedanenolide, Neocnidilide and neophytadiene as main components. The minimal inhibitory concentration (MIC) and the minimal lethal concentration were used to evaluate the antifungal activity of the oils against <i>Candida albicans</i> , <i>Candida tropicalis</i> , <i>Candida krusei</i> , <i>Candida guilliermondii</i> , <i>Candida parapsilosis</i> , <i>Cryptococcus neoformans</i> , <i>Trichophyton rubrum</i> , <i>Trichophyton mentagrophytes</i> , <i>T. mentagrophytes</i> var. <i>interdigitale</i> , <i>Trichophyton verrucosum</i> , <i>Microsporum canis</i> , <i>Microsporum gypseum</i> , <i>Epidermophyton floccosum</i> , <i>Aspergillus niger</i> , <i>Aspergillus fumigatus</i> and <i>Aspergillus flavus</i> . The oil from Italy rich in neophytadiene is the more active, with MIC values of 0.04-0.64 μL mL ⁻¹ [1]

Solubility Information

Solubility	DMSO: 45 mg/mL (231.64 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.1475 mL	25.7374 mL	51.4748 mL
5 mM	1.0295 mL	5.1475 mL	10.295 mL
10 mM	0.5147 mL	2.5737 mL	5.1475 mL
50 mM	0.1029 mL	0.5147 mL	1.0295 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Marongiu B, et al. Isolation of the volatile fraction from *Apium graveolens* L. (Apiaceae) by supercritical carbon dioxide extraction and hydrodistillation: chemical composition and antifungal activity. *Nat Prod Res.* 2013;27(17):