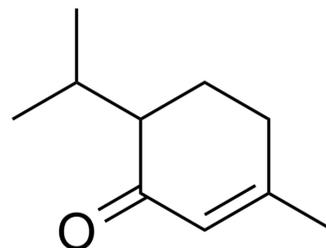


Piperitone

Cat. No.:	HY-N9496		
CAS No.:	89-81-6		
Molecular Formula:	C ₁₀ H ₁₆ O		
Molecular Weight:	152.23		
Target:	Others		
Pathway:	Others		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (656.90 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		6.5690 mL	32.8450 mL	65.6901 mL
		5 mM		1.3138 mL	6.5690 mL	13.1380 mL
10 mM			0.6569 mL	3.2845 mL	6.5690 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (16.42 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (16.42 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (16.42 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Piperitone is as a powerful repellent and antiappetent agent. Piperitone is very toxic to <i>Cymbopogon schoenanthus</i> (<i>C. schoenanthus</i>) adults, newly laid eggs and to neonate larvae. Insecticidal activity ^[1] .
In Vitro	Piperitone isolated from <i>Cymbopogon schoenanthus</i> (<i>C. schoenanthus</i>) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The insecticidal activity of crude essential oil extracted from <i>Cymbopogon schoenanthus</i> and of its main constituent,

Piperitone, is assessed on different developmental stages of *Callosobruchus maculatus* (*C. maculatus*). Piperitone is toxic to *C. maculatus* adults with a LC₅₀ value of 1.6 µL/L. Piperitone inhibits the development of newly laid eggs and of neonate larvae, but is less toxic than the crude extract to individuals developing inside the seeds. Piperitone shows the strongest ovicidal activity. All the eggs were aborted at 6.7 µL/L. Piperitone (10 µM) kills all the neonate larvae^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Fifty pairs of <i>C. maculatus</i> adults ^[1]
Dosage:	6.7, 10, 16.7 or 33.3 µL/L
Administration:	24 hours
Result:	Piperiton was more toxic than crude oil because the LC ₅₀ recorded was 1.6 µL/L for Piperitone vs. 2.7 µL/L for the crude oil.

REFERENCES

[1]. Guillaume K Ketoh, et al. Comparative effects of *Cymbopogon schoenanthus* essential oil and piperitone on *Callosobruchus maculatus* development. *Fitoterapia*. 2006 Dec;77(7-8):506-10.

Caution: Product has not been fully validated for medical applications. For research use only.

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