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- Trockeneiszuschlag
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- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

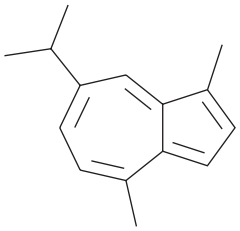
linkedin.com/company/szaboscandic

PRODUCT INFORMATION

Guaiazulene

Item No. 31506

CAS Registry No.:	489-84-9
Formal Name:	1,4-dimethyl-7-(1-methylethyl)-azulene
Synonym:	NSC 4714
MF:	$C_{15}H_{18}$
FW:	198.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 244, 284 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Guaiazulene is supplied as a solid. A stock solution may be made by dissolving the guaiazulene in the solvent of choice, which should be purged with an inert gas. Guaiazulene is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of guaiazulene in ethanol and DMSO is approximately 25 mg/ml and approximately 30 mg/ml in DMF.

Guaiazulene is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, guaiazulene should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Guaiazulene has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Guaiazulene is a sesquiterpene that has been found in *M. chamomilla* and has diverse biological activities.[1,2,3] It inhibits lipid peroxidation in rat hepatic microsomes (IC_{50} = 9.8 µM), as well as scavenges hydroxyl and 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in cell-free assays.[1] It inhibits LPS-induced nitric oxide production in RAW 264.7 cells (EC_{50} = 10.1 µM) but is cytotoxic to RAW 264.7 cells at higher concentrations with cytotoxic concentration (CC_{50}) values of 29.8 and 30.8 µM in the presence and absence, respectively, of LPS.[2] Guaiazulene is cytotoxic to N2a neuroblastoma cells and primary rat neurons in a concentration-dependent manner.[3] It inhibits decreases in hepatic glutathione (GSH) levels induced by paracetamol (acetaminophen; Item No. 10024) in rats when administered at a dose of 250 mg/kg.[1]

References

1. Kourounakis, A.P., Rekka, E.A., and Kourounakis, P.N. Antioxidant activity of guaiazulene and protection against paracetamol hepatotoxicity in rats. *J. Pharm. Pharmacol.* **49(9)**, 938-942 (1997).
2. Hashiba, K., Yokoyama, K., Wakabayashi, H., *et al.* Inhibition of LPS-stimulated NO production in mouse macrophage-like cells by azulenes. *Anticancer Res.* **24(6)**, 3939-3944 (2004).
3. Togar, B., Turkez, H., Hacimuftuoglu, A., *et al.* Guaiazulene biochemical activity and cytotoxic and genotoxic effects on rat neuron and N2a neuroblastom cells. *J. Intercult. Ethnopharmacol.* **4(1)**, 29-33 (2015).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM