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Chemical composition of the essential oil from the leaves of *Endostemon obtusifolius* (E.Mey. ex Benth.) N.E.Br.

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Endostemon obtusifolius (Lamiaceae) is a perennial shrub indigenous to South Africa. The leaves of this species are commonly used for culinary purposes as it exudes a potent, minty aroma. In this study, the chemical composition of the volatile oil from the leaves of *E. obtusifolius* (E.Mey. ex Benth.) N.E.Br. was investigated. The composition of oils obtained by hydrodistillation followed by gas chromatography and mass spectrometry (GC-MS) yielded 50 compounds representing 99.8% of the oil. The major volatile components of the oil were phenol (26.92%), 1,3,6,10-cyclotetradecatetraene, 3,7,11-trimethyl-14-(1-methylethyl)-, [S-(E,Z,E,E)]-(19.13%), acetic acid, 1,7,7-trimethyl-bicyclo[2.2.1]hept-2-yl ester(6.44%), cyclooctene(5.25%), 1H-cyclopropa[a] naphthalene,decahydro-1,1,3a-trimethyl-7-methylene-[1aS-(1a.alpha.,3a.alpha.,7a.beta.,7b.alpha.)]- (4.98%), 3-cyclohexen-1-ol,4-methyl-1-(1-methylethyl)-(3.81%), cycloisolongifolene, 8,9-dehydro- (3.52%), 1H-cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-(3.12%). Phenol, the major compound detected in *E. obtusifolius*, is used as an oral anesthetic and analgesic to treat pharyngitis. Phenol is also a versatile precursor to a large collection of drugs, including aspirin, herbicides and pharmaceutical drugs.

Biography

C. T. Sadashiva started his research work in 2003 at Mysore University, Karnataka, India and completed his Ph.D. in 2008 in the area of Medicinal Chemistry. His expertise is centered on the synthesis of organic chemicals, characterization using spectral methods conducting *in vivo* animal based experiments, *in vitro* isolated tissue based experiments, care breeding, and management of laboratory animals in performing biochemical assays and cell based assay and spectrophotometric techniques. He has published 28 papers in various international journals with high impact factors. He has served as the senior chemist (1998) in Charka Pharmaceuticals Company, Karnataka, India. Furthermore, Dr. Sadashiva was employed as senior scientist at the Centre for Medicinal Plants Research, Kerala (India) engaged in standardization of medicinal plants, extractions, isolations, characterization and quantification of biomarkers using different analytical technique and validation of medicinal plants through *in vivo* and *in vitro* pharmacological models. He has served as a visiting scientist, and currently as a postdoctoral researcher, at the University of KwaZulu-Natal (UKZN), Durban, South Africa in the research area of the identification of biomolecules and drug targeting. The goal of his research efforts is the development of biological treatments for neurological disorders and disease using acetyl cholinesterase inhibition assays, anti-inflammatory activity and antimicrobial activity studies.