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Composition and antimicrobial activity of the volatile oil of *Artemisia kopetdaghensis* Krasch., M.Pop. & Linecz ex Poljak from Iran

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Abstract

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Artemisia kopetdaghensis Krasch., M.Pop. & Linecz ex Poljak (Asteraceae) is a common perennial herb growing wild in north-eastern parts of Iran. The essential oil of *A. kopetdaghensis* was isolated by hydrodistillation in 2.14% (v/w) yield. The chemical composition of the essential oil was examined by GC and GC-MS. Thirty-three compounds were identified, representing 86.8% of the total oil. The major constituents were methyleugenol (24.4%), [geranial](#) (13.6%), davanone (11.1%), camphor (9.8%) and [neral](#) (7.4%). Minimum inhibitory concentration was determined, using the agar dilution method, against eight bacteria and two fungal strains. The essential oil showed a moderate anti-microbial activity. Copyright © 2006 John Wiley & Sons, Ltd.

Reaxys Database Information

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Author keywords

Antimicrobial; *Artemisia kopetdaghensis*; Asteraceae; Davanone; Essential oil; [Neral](#)

Indexed Keywords

Engineering controlled terms: Biochemistry; Composition; Gas chromatography; Mass spectrometry; Microbiology; Plants (botany)

Engineering uncontrolled terms: Antimicrobial activity; *Artemisia kopetdaghensis*; Asteraceae; Perennial herb; Volatile oil

Engineering main heading: Essential oils

EMTREE drug terms: alpha selinene; antiinfective agent; *Artemisia kopetdaghensis* extract; beta citral; beta pinene; bisabolol; borneol; camphene; camphor; caryophyllene; cineole; citral; essential oil; farnesol; fenchyl acetate; geranyl butyrate; geranyl propionate; linalool; methyleugenol; myrcene; myrtenal; neryl acetate; para cymene; pinene; piperitone; plant extract; selinene; spathulenol; terpinen 4 ol; unclassified drug; unindexed drugEMTREE medical terms: antibiotic sensitivity; antifungal activity; antimicrobial activity; *Artemisia kopetdaghensis*; article; chemical composition; controlled study; drug analysis; drug isolation; drug structure; gas chromatography; Iran; mass spectrometry; minimum inhibitory concentration; nonhumanSpecies Index: *Artemisia*; Asteraceae; Dryobalanops

Chemicals and CAS Registry Numbers: beta pinene, 127-91-3; bisabolol, 23089-26-1, 515-69-5; borneol, 10385-78-1, 507-70-0; camphene, 79-92-5; camphor, 464-49-3, 76-22-2, 8008-51-3; caryophyllene, 87-44-5; cineole, 470-82-6, 55962-72-6; citral, 106-26-3, 141-27-5, 5392-40-5; farnesol, 4602-84-0; linalool, 78-70-6; methyleugenol, 93-15-2; myrcene, 123-35-3; myrtenal, 564-94-3; para cymene, 99-87-6; pinene, 80-56-8; piperitone, 89-81-6; selinene, 27104-12-7; spathulenol, 6750-60-3; terpinen 4 ol, 562-74-3

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