

external link (opens in a new window)

Search Sources Analytics Alerts My list Settings Live Chat Help Tutorials

Quick Search

Search

Back to results | < Previous 138 of 186 Next >

[Link to Full Text](#) | [Download](#) [Export](#) [Print](#) [E-mail](#) [Create bibliography](#) [Add to My List](#)

Journal of Essential Oil-Bearing Plants

Volume 10, Issue 3, May 2007, Pages 259-264

Evaluation of antibacterial activity of the essential oils of Zataria multiflora, Carum copticum and Thymus vulgaris by a thin layer chromatography-bioautography method

Behravan, J.^{ab}, Ramezani, M.^{ab}, Hassanzadeh, M.K.^{ac}, Ebadi, S.^b^a Biotechnology Laboratory, Biotechnology and Pharmaceutical Research Centers, Mashhad, Iran^b Department of Pharmacognosy and Biotechnology, School of Pharmacy, Mashhad, Iran^c Department of Medicinal Chemistry, Faculty of Pharmacy, Mashhad University of Medical Sciences, Mashhad, Iran

Abstract

[View references \(14\)](#)

Bioautography is a method to localize antimicrobial activity on a chromatogram. A modified agar overlay bioautographic method was used to investigate the antibacterial activities of essential oils of Zataria multiflora, Carum copticum and Thymus vulgaris. The essential oils of all the plants exhibited activity against Bacillus subtilis and Escherichia coli at R_F 0.4 which represented the R_F for thymol and carvacrol in petroleum ether chloroform (50:50 as solvent system). Twenty two components were identified in the essential oil of Carum copticum. The main compounds consisted of thymol (71.07%), terpinolene (13.08%) and cymene (10.20%). It could be concluded that the observed antibacterial activity was mainly due to the presence of thymol and carvacrol in the essential oils.

Reaxys Database Information

|

Author keywords

Antibacterial activity; Bioautography; Carum copticum and Thymus vulgaris; Essential oil; Zataria multiflora

Indexed Keywords

Species Index: Bacillus subtilis; Carum carvi; Escherichia coli; Thymus vulgaris; Trachyspermum copticum; Zataria multiflora

ISSN: 0972060X Source Type: Journal Original language: English

Document Type: Article

References (14)

[View in table layout](#)
[Page](#) [Export](#) [Print](#) [E-mail](#) [Create bibliography](#)

- 1 Nostro, A., Germanò, M.P., D'Angelo, V., Marino, A., Cannatelli, M.A.
1 Extraction methods and bioautography for evaluation of medicinal plant antimicrobial activity
 (2000) Letters in Applied Microbiology, 30 (5), pp. 379-384. Cited 171 times.
[Link to Full Text](#) [View at publisher](#)
- 2 Choma, I.M., Choma, A., Staszczuk, K.
2 Determination of flumequine in milk by thin-layer chromatography-bioautography
 (2002) Journal of Liquid Chromatography and Related Technologies, 25 (10-11), pp. 1579-1587. Cited 14 times.
 doi: 10.1081/JLC-120005705
[Link to Full Text](#) [View at publisher](#)

Burkhead, K.D., Schisler, D.A., Slininger, P.J.

Cited by since 1996

This article has been cited **3 times** in Scopus:
(Showing the 2 most recent)

Goudarzi, G.R., Saharkhiz, M.J., Sattari, M.
Antibacterial activity and chemical composition of Ajowan (Carum copticum Benth. & Hook) essential oil
 (2011) Journal of Agricultural Science and Technology

Sherma, J.
Planar chromatography
 (2010) Analytical Chemistry

[View details of all 3 citations](#)

Inform me when this document is cited in Scopus:

[Set alert](#) | [Set feed](#)

Related documents

Showing the 2 most relevant related documents by all shared references:

Khanavi, M., Norouzi, M., Tabatabaee, H.
Chemical compositions and antiviral effects of the essential oil of Zataria multiflora Boiss. and Origanum majorana L.
 (2010) Journal of Medicinal Plants

Choi, S.-I., Chang, K.-M., Lee, Y.-S.
Antibacterial activity of essential oils from Zanthoxylum piperitum A.P. DC. and Zanthoxylum schinifolium
 (2008) Food Science and Biotechnology

[View all related documents](#) based on all shared references or [select the shared references](#) to use

Find more related documents in Scopus based on:

[Authors](#) | [Keywords](#)

Lipid Structures (beta)

3 Instances found

- Thymol**
[Show Details](#) [Show Occurrences - 3](#)
- Carvacrol**
[Show Details](#) [Show Occurrences - 2](#)
- Terpinolene**
[Show Details](#) [Show Occurrences - 1](#)

Powered by LIPID MAPS | [About this application](#)

More By These Authors

The authors of this article have a total of **152 records** in Scopus:
(Showing 5 most recent)

Malekshah, O.M., Lage, H., Bahrami, A.R., Afshari, J.T., Behravan, J.

PXR and NF- B correlate with the inducing effects of IL-1 and TNF- on ABCG2 expression in breast cancer cell lines
 (2012) European Journal of Pharmaceutical Sciences

Dehshahri, A., Oskuee, R.K., Ramezani, M.
Plasmid DNA delivery into hepatocytes using a

[Add apps](#) | [Help](#)