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ANTIMICROBIAL ACTIVITY AND BIOCHEMICAL ANALYSIS OF IBERIS HALOPHILA

ÖZCAN ŞİMŞEK¹, ALI YETGİN², KEREM CANLI³, ERGİN MURAT ALTUNER⁴

ABSTRACT

Iberis halophila is rare endemic species in Central Turkey, so related research doesn't exist. Antimicrobial activity was investigated against 17 bacteria and 1 fungi by using disk diffusion method. These microbial strains include *Bacillus*, *Enterobacter*, *Enterococcus*, *Escherichia*, *Klebsiella*, *Listeria*, *Pseudomonas*, *Salmonella*, *Staphylococcus* and *Candida* species. Twelve of them are standard species and they are important for exact determination of antimicrobial activity. 4.94, 9.87 and 19.74 mg samples were prepared by using ethanol extraction method. Also, bioactive composition of this sample was determined by Gas Chromatography-Mass Spectroscopy and National Institute of Standards and Technology (NIST) library was used for mass spectra analysis. The results were presented that *I. halophila* has antibacterial activity against eight of the tested strain. Several active metabolites were identified, but some composition of this sample is not match with library. Unknown molecule should be analyzed by NMR spectra for 3d structure determination and identification. These results are the first report for the antimicrobial potential and chemical composition of *I. halophila*.

KEYWORDS

Iberis halophila, endemic plant, antimicrobial activity, bioactive composition, ethanol extract

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