

A STUDY OF SOME BIOACTIVE COMPONENTS IN WILD MALVA (*Malva parviflora* L.) PLANT IN DIFFERENT LOCATIONS OF BASRAH, SOUTHERN IRAQ

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ABSTRACT

The study was conducted in the GC-MS laboratory at the College of Agriculture, University of Basrah, Iraq, with the aim of detecting the bioactive compounds in the volatile oils of the malva leaf extract collected from three sites south of Basrah (Garmat-Ali, Abu Al-Khasib, and Al-Zubair) during the growing season 2018-2019. The results showed the presence of 30 bioactive compounds in the extract of the volatile oils of the leaves of the malva plant that were collected from the three sites. The results indicated that the bioactive compounds that were diagnosed in the two sites of Garmat-Ali and Abu Al-Khasib were similar in compound type and the percentage of peak area. Whereas, some types of bioactive compounds and the percentage of peak areas differed at Al-Zubair site when compared with the two other sites. The results showed that the highest percentage of the peak areas of the bioactive compounds 6-Octadecenoic acid and Oleoyl chloride were 35.43% and 9.48%, respectively in the plants collected from the Al-Zubair site. While, the results showed that the highest percentage of the peak areas of the bioactive compounds 9,12,15-Octadecatrienoic acid, methyl ester, (Z,Z,Z), Hexatriacontane and Hexadecanoic acid, methyl ester were 10.20%, 8.72% and 7.55%, respectively in the plants collected from the two sites, Garmat-Ali and Abu Al-Khasib.

Keywords: Active compound; GC-MS; leaf extract; medicinal plant; volatile oil.

INTRODUCTION

The environment in which the medicinal plant grows is considered a vital and determining

medium for the growth and production of bioactive compounds, quantitatively and qualitatively, such as climatic factors, soil, geographical location, and its exposure to stresses.