عنوان مقاله:

Gas Chromatography-Mass Spectrum andFourier-transform infrared spectroscopy analysis of Fixed Oil from Sudanese Ziziphus spina Christi Fruits Pulp

محل انتشار:

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خلاصه مقاله:

The study was carried out in reason of investigating the phytochemical constituents that could be present in the Ziziphus spina Christi Sudanese plant, by using two different analytical methods such as the Gas Chromatography-Mass spectrum (GC-MS) and the Fourier-transform infrared spectroscopy (FTIR). The Z. spina Christi Fruit pulp oil was extracted with four solvents methanol, petroleum ether, acetone, and isopropyl alcohol, using Soxhlet apparatus, The Gas Chromatography-Mass Spectrum (GC-MS) was carried out to analyze the methanolic fruit pulp oil extract, the results indicated to the presence of thirty-two phytochemical compounds. Ten of them are majors, namely۹-Octadecenoic acid compounds, methyl ester, (E) - (۱۷.۰۷%), ۷-Oxabicyclo[۴.۱.۰]heptane,۱-methyl-۴-(۲-methyloxiranyl)-(۱۶.۴۳%), ۹-Octadecenoic acid (Z) -, methyl ester (۱۰.۶%), Hexadecanoic acid, methyl ester (۸.۷۸%), methyl stearate (۶.۷۱%), Docosanoic acid, Methyl ester (۴.۲۲%), cis-۱۳-Eicosenoic acid, methyl ester (۳.۴۳%)%), methyl ۱۸-methylnonadecanoate (۲.۹۸%), squalene (۲.۳۸%), ۹-tricosine, (Z) - (۲.۴%).While the Fourier-transform infrared spectroscopy (FTIR) analysis was carried out for (methanol, petroleum ether, acetone, and isopropyl alcohol) fruit pulp oil extract the result showed the presence of many active functional groups such as alcohols, phenols, alkanes, alkenes, carbonyls, and Carboxylic acids and aromatic compounds in the extracts with different peak types and correspondences. The GC-MS and FTIR analysis showed the availability of bioactive compounds in the Ziziphus spina fruits pulp oil extracts, and these ingredients may be responsible for pharmaceutical value and could lead to the discovery a novel drugs

کلمات کلیدی:

Z. spina Christi (L), Fruits pulp, Lyophilization, Soxhlet apparatus, fixed oil, Novel drugs