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- Document Title** : STUDIES ON THE LEAVES OF CLUYTIA MYRICOIDES EURYOPS ARSBICUS & PLECTRANTUS TENUIFLORUS AND THEIR EFFECTS ON SOME OF MICROORGANISMS AND CELL TISSUES  
دراسات على أوراق الصوم والصعبر والشارة وتأثيرها على بعض الكائنات الدقيقة والأنسجة الخلوية
- Document Language** : Arabic
- Abstract** : This study discusses chemical and biological aspects for three plants grow in the villages of Taif city, namely: Plectranthus tenuiflorus (Sharah), Euryops arabicus (Soam); and Clutia myricoides (Soabor). The chemical studies contain primary estimation for alimental and remedial values of the three plants leaves and their whole extracts and fractions, where the whole carbohydrates concentration was  $5.98 \times 10^{-5}$  M in Sharah leaves,  $5.9 \times 10^{-5}$  and  $8.62 \times 10^{-5}$  M respectively in Soam and Soabor leaves. Using paper chromatography separation for whole ethanolic extracts of the three plants leaves, 7 protein amino acids were detected in Sharah extract, and 9 in Soam and Soabor extracts. The quantitative and qualitative estimation for macronutrients (Ca, P, Na and Mg) and micronutrients (Mn, Zn, Cu, and Fe) along with Pb indicated that concentration of these elements in the plants leaves was less than the interdependent range of the elements in agricultural products. The phytochemical tests indicated that there are many secondary metabolisms in the plants leaves. The study also identified most monoterpenoides and sesquiterpenoides in the essential oils extracted by hydro-distillation from Sharah leaves and Soam leaves and flowers under many conditions. Biological aspects included studying the inhibitory activity against growth of six microorganisms contribute to wound infection either in direct or opportunistic manners, under effect of whole leaves extracts and fractions. Results revealed that the extracted essential oil from Sharah leaves was found to possess strong antimicrobial activity especially against Candida albicans, Staphylococcus aureus and Klebsiella pneumoniae as well as, the essential oil extracted from Soam leaves that showed efficient antimicrobial activity particularly against C. albicans and Streptococcus pyogenes, while the whole ethanolic extract of Soabor leaves exhibited inhibitory effect against Pseudomonas aeruginosa, S. pyogenes and K. pneumoniae. Biological studies indicated that (i) essential oil of Sharah, (ii) essence of Sharah leaves juice demonstrated enhanced proliferation of fibroblasts in cell and tissue culture, in addition to (iii) the whole ethanolic extract of Soabor leaves which showed relative activity for enhancing proliferation of fibroblasts. According to all previous results, three plant extracts were tested for their wound healing activity in Wister rats and the results clearly substantiate the beneficial effects of Sharah leaves juice essence in accelerating wounds healing compared to the relative effects of Sharah essential oil and Soabor ethanolic extract.
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