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Phytochemical composition of *Plectranthus tenuiflorus*, *Euryops arabicus* and *Clutia myricoides* extracts and study some of its medical applications

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This study partakes of the chemical & applicative respects for three plants grow in villages of Taif city which presented in Sharah *Plectranthus tenuiflorus*, Soam *Euryops arabicus* & Soa'bor *Clutia myricoides*.

The chemical studies contain primary estimation for alimental & remedial value of three plants' leaves and their whole extracts and fractions, where total carbohydrates concentration stood at 5.98×10^{-5} M in Sharah leaves, 5.9×10^{-5} & 8.62×10^{-5} M respectively in Soam & Soa'bor leaves. By use of paper chromatography separation for whole ethanolic extracts of the three plants' leaves, 7 protein amino acids were determining in Sharah extract and 9 ones in Soam & Soa'bor extracts. Also the quantitative and qualitative estimation indicated that the concentration of macronutrients (Ca, P, Na & Mg) and micronutrients (Mn, Zn, Cu, Pb & Fe) 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 metabolism products in the plants' leaves. The study also identified most mono- & sescoterpenoides in essential oils that extracted by hydro-distillation from Sharah's leaves and Soam's leaves and flowers under many conditions.

Applicative respects included the study of inhibitory activity against growth of six microorganisms contribute in wound infection either by direct or opportunistic manner under effect of whole leaves' extracts & fractions, and the results revealed that the extracted essential oil from Sharah's leaves was found to possess strong antimicrobial activity especially against *Candida albicans*, *Staphylococcus aureus* & *Klebsiella pneumoniae* as well as the essential oil extracted from Soam's leaves that showed efficient antimicrobial activity particularly against *C. albicans* & *Streptococcus pyogenes*, while the whole ethanolic extract of Soa'bor leaves exhibited inhibitory effect against *Pseudomonas aeruginosa*, *S. pyogenes* & *K. pneumoniae*.

Also the results of applicative studies indicated that the (i) essential oil of Sharah, (ii) essence of Sharah's leaves juice demonstrated enhanced proliferation of fibroblasts in cell & tissue culture, in addition to (iii) the whole ethanolic extract of Soa'bor leaves which showed relative activity for enhancing proliferation of fibroblasts. According to all previous results, the later three extracts were tested for their wound healing activity in rats and the results clearly substantiate the beneficial effects of the essence of Sharah's leaves juice in acceleration of wound healing compared to the relative effects of Sharah's essential oil and Soa'bor's ethanolic extract.