Chemical Composition and Biological Activity of the Essential Oils of Senecio aegyptius var. discoideus Boiss.

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The essential oil of Senecio aegyptius var. discoideus flowers, leaves, stems and roots were isolated by hydrodistillation. Analysis of the oils by capillary GLC and GLC-mass spectrometry were performed and 34 out of 37 compounds were identified. The main component was isolated and characterized as 1,10-epoxyfuranoeremophilane using a combination of GLC, GLC-MS, and NMR analyses. The oils of flowers, leaves and stems were rich in monoterpene hydrocarbons while the root oil mainly contains furanoeremophilanes. Flower and leaf volatile oils showed significant level of antifungal activity against C. albicans, moderate effect against Gram positive bacteria, however, it has weak activity against Gram negative bacteria. The isolated sesquiterpene (1,10-epoxyfuranoeremophilane) exhibited substantial inhibitory activity against Gram negative bacteria.