عنوان مقاله:

Chemical Composition and Antioxidant Activity of Solenostemma oleifolium Essential Oil from Southern Algeria

محل انتشار:

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خلاصه مقاله:

Introduction: Solenostemma oleifolium is a species that grows in extremely dry conditions. It is widespread at the foot of cliffs and in rocky areas. It is a medicinal plant used for the treatment of diabetes, respiratory disorders, rheumatism, stomach pain, urinary tract infections and febrifuge. As a part of this research program on natural compounds with antioxidant properties, the main objective of this study was to determine the chemical composition and the antioxidant activity of essential oil of S. oleifolium. Material and Methods: In this study, the aerial parts of the plant were hydrodistilled in a Clevenger-type apparatus. The isolated essential oil was analyzed using gas chromatography mass spectrometry (GC-MS). The antioxidant activity of the essential oil was assessed using 2,2-diphenyl-1-picrylhydrazyl (DPPH) and ferric-reducing power (FRAP). Results: The essential oil of S. oleifolium was principally characterized by oxygenated monoterpenes (94.3%) represented by linalool (59.0%), α-terpineol (14.5%) and geraniol (12.4%), followed by small amounts of nerol (3.7%) and piperitone (3.6%). The results of the antioxidant activity of essential oil showed an interesting propriety in the quenching of DPPH radical, with an IC50 of 3.3 g/L. On the other hand, essential oil showed the presence of the reductive effect, which increased with an increase in concentration. Conclusions: The results of this research showed that the S. oleifolium essential oil presented an interesting antioxidant property. Actually, it could be proposed as a new potential source of natural additives for the food or pharmaceutical industries.

کلمات کلیدی:

Essential oil, Antioxidant activity, Solenostemma Oleifolium, DPPH, FRAP