

Phytochemical screening, evaluation of phenolic content and antioxidant activity of a plant from the Algerian Sahara «*Haloxylon scoparium*»

BOUSSENA A.^{1,2}, BAHRI F¹., KOUIDRI M²., MERINI M²., RAHAL I.²

¹ Laboratory of Microbiology and Plant Biology, Abdelhamid Ibn Badis University, Faculty of Nature and Life Sciences, Department of Biology, 27000 BP, Mostaganem, Algeria

² Laboratory of Natural Bio-resources, Hassiba Benbouali University, Faculty of Nature and Life Sciences, Department of Biology, BP 151, Hay Es Salem, 02000 - Chlef, Algeria

Email: abdelhadi.boussena@yahoo.fr

This work is part of the valorization of the *Haloxylon scoparium* plant, belonging to the Chenopodiaceae family and native to south of Algeria. The aim of the present work is to estimate the phenolic compounds contents of its extracts and to evaluate their antioxidant power. After extraction by maceration of the aerial part of *Haloxylon scoparium*, the yield of extracts was calculated. The best extraction yield is obtained in the methanolic extracts 9.11%. Phytochemical screening investigations using standard method showed that the aerial part contains mainly phenols and flavonoids. The quantitative analysis using spectrophotometric assay revealed that the methanolic extract had the highest phenols and flavonoids contents (307.58 mg AGE/g extract and 9.34 mg CE/g extract, respectively). The antioxidant activity of the various extracts obtained is evaluated by the DPPH radical

scavenging method. The examination of the inhibitory concentration values shows that the methanolic extract is the most active with values of IC₅₀ = 0.25 mg/mL. These findings revealed that *H. scoparium* extracts could be a natural source of antioxidants that can prevent several diseases

Keywords: *Haloxylon scoparium*, phytochemical, antioxidant Activity, extracts.