madridge CONFERENCES

International Conference on
Medicinal and Pharmaceutical Chemistry

December 5-7, 2016 Dubai, UAE

Physicochemical analysis of antioxidant compounds in fresh juice from cactus cladodes

TALBI Meryeme[1,2], HAILAF Anouar[1,2], ELKHARRASSI Youssef[2] NASSER Boubker[2] and **Moustaid Khadija[1]**
[1]Laboratory of Applied Chemistry & Environment, University Hassan 1er, Department of Chemistry, Morocco
[2]Laboratory of Biochemistry & Neuroscience, University Hassan 1er, Department of biology, Morocco

Many studies have reported that different parts of Opuntia genus (flower, skin fruit, seed, cladode) contains a high level of some bioactive antioxidant components such as phenolic acids, flavonoids, and vitamins, that have a lot of benefits at the term of nutritional, pharmacological, therapeutic, and health.

This work concerns the physicochemical analysis and evaluation of antioxidant capacity in cladode juices of two species of Opuntia from Settat-Casablanca region of Morocco. The objectif of this study was to determine the composition of phenolics, vitamin C and betalains, and the evaluation of antioxidant activity by 2, 2-diphenyl-1-picrylhydrazyl (DPPH) and the hydrogen peroxide scaneging (H2O2) in cladode juices.

The Total phenolics content are 1216,10 ± 0,03 and 1113,94 ± 0,02 mg of Gallic Acid Equivalent (GAE) /100 g of fresh weight, then both species indicate a similar quantities of vitamin C, 13,78 ± 0,04 mg of ascorbic acid /100 ml and 13,33 ± 0,05 of ascorbic acid /100 ml in Opuntia ficus indica and Opuntia megacantha respectively. The quantification of betalain pigments (betaxanthin and betacyanin) were higher in Opuntia ficus indica (5,12 ± 0,04 and 10,46 ±0,00 mg/100 g of fresh weight), than Opuntia megacantha one (3,87 ± 0,01 and 6,18 ± 0,00 mg/100 g of fresh weight). The species had comparable antioxidant activity in both, H2O2 and DPPH assays.

The analyzes of bioactive compounds from two species cladode juices had antioxidant activity and confirm their potential for exploiting the autochthonous of existing biodiversity of cactus, which makes this plant a wealth that should be better investigated and analyzed. Keywords: Opuntia, juice cladodes, phenolics, vitamin C, betalains, antioxidants.