PAPER

PHYTOCHEMICAL CHARACTERISTICS AND ANTIOXIDANT ACTIVITY OF SEVERAL FIG (*FICUS CARICA* L.) ECOTYPES

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ABSTRACT

In this study, phenolics and reducing sugar compositions of fig fruits (27 Tunisian ecotypes) were analyzed. In addition, the antioxidant activity was determined by two methods; the ABTS and the DPPH assays. Phytochemical composition of the 27 fig ecotypes was found to be very diverse, as the total polyphenols varied from 51.50 (*'Bouholi'*) to 100.23 (*'Nasri'*) mg gallic acid equivalent/100 g fresh weight. Total flavonoids also varied from 0.33 (*'Bayoudhi1'*) to 17.59 (*'SoltaniAhmar'*) mg quercetin equivalent/100 g fresh weight, and total anthocyanins extended from 1.61 (*'Besbessi'*) to 11.67 (*'Zidi2'*) mg/100 g fresh weight. Additionally, DPPH % inhibition ranged from 11.37 (*'Besbessi'*) to 64.73 % (*'Bouharrag'*) and ABTS from 38.50 (*'Sawoudi5'*) to 676.13 (*'Nemri'*). The ecotypes 'Zergui' and 'Nasri' had the highest contents of glucose (5.68 and 4.83 g/ 100 g FW, respectively) and fructose (5.43 and 4.69 g/ 100 g FW, respectively). The results also showed that fig fruits are a good and valuable source of natural antioxidants that can be used in food and medical sectors.

Keywords: anthocyanins, antioxidant activity, ecotypes, *Ficus carica*, flavonoids, fruits, polyphenols