ANTIOXIDANT ACTIVITY OF HYDROLATE OBTAINED FROM THE AERIAL PART OF SWEET BASIL OCIMUM BASILICUM L.

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Ocimum basilicum is a well-known aromatic, medicinal, and culinary plant. The essential oils obtained through steam distillation from the leaves and flowering tops of sweet basil have antiseptic, antimicrobial, antioxidant, antiviral, and anti-inflammatory properties. As a product of hydrodestination hydrolates can be obtained. The main objective of the study was the spectrophotometric quantification of the content of total phenols, tannins, nontannins and flavonoids in the hydrolate obtained from aerial part of O. basilicum, the evaluation of antioxidant activity and the correlation analysis of certain phenolic compounds and antioxidant activity. Quantitative analysis of the concentration of total phenolic, flavonoid, tannin and nontannin in the hydrolate determined 151.91 ± 23.491mg CE/L , 23.34 ± 3.978 mg CE/L, 119.75 ± 8.09 mg CE/L and 0.86 ± 0.07 mg Ru/L, respectively. The hydrolate showed antioxidant potential in three assays for study: scavenged 2,2-diphenyl-1 picrylhydrazyl (DPPH) radicals with IC₅₀ 0.51 ± 1.07 %; total antioxidant potential, 392.15 ± 16.299 mmol of Fe²⁺/L and prevention of lipid peroxidation in a way that depends on concentration. In addition, correlation between phenolic compounds contents and antioxidant activity in hydrolated was noted. The demonstrated antioxidant properties of O. basilicum hydrolate may be crucial to its future as a potential natural antioxidant.

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Key words: antioxidant, ferrie reducing ability ofplasma, hydrosol, polyphenols, sweet basil