2. AGRIMONY AND CHICORY- SOURCES OF PHENOLIC ACIDS

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Introduction. Phenolic acids are found in a wide range of products in the plant kingdom, including medicinal plants, known as chemical compounds with antioxidant properties that function as free radical scavengers and reduce the harmful impact of oxidative damage on health.

Aim of the study. Quantitative determination of phenolic acids in the aerial parts of Agrimoniae herba (Agrimonia eupatoria L.fam. Rosaceae) and Cichorii herba (Cichorium intybus L fam. Asteraceae).

Methods and materials. The aerial parts of Agrimony and Chicory were harvested in the flowering phase from the collection of Scientific and Practical Centre for Medicinal Plants of *Nicolae Testemitanu* SUMPh, during the flowering period (2021). The vegetal products were ground with a laboratory mill to a fine powder. The quantitative analysis of phenolic acids was determined through 3 methods by Metertech UV/VIS SP 8001 spectrophotometer.

Results. Both plants have been studied in research projects for their antioxidant, hepatoprotective and antibacterial properties. Agrimony (A. eupatoria) is used for antibacterial, antiviral, and anti-inflammatory property, due to the chemical compounds such as tannins, phenolic acids (p-coumaric acid, various caffeoyl-quinic acids), polyphenol compounds, triterpenoids, flavonoids. Chicory (C. intybus) is a vegetal product that stimulate digestion, detoxify the body, and decrease the cholesterol through the cichoriin, bitter principles, latex, inulin-type fructans and phenolic acids (caffeic acid, mono- and dicaffeoylquinic acids, including chlorogenic acid (12-17%) and other phenol-carboxylic acids (protocatechuic, p-hydroxybenzoic, isovanillic, p-coumaric). The spectrophotometric analysis performed with Arnow reagent (518 nm), according to the European Pharmacopoeia, shows the total phenolic acids, equivalent in caffeic acid with 3.67 mg/g for Agrimony and 1.48 mg/g for Chicory. Our experimental results denote a higher content of hydroxycinnamic acid in Chicory for the method performed in extractive solutions obtained with 30% ethyl alcohol, equivalent in chlorogenic acid (13.22%) and the for the method with ethyl alcohol 20% of the extractive products, equivalent in caffeic acid (10, 93%), followed by Agrimony for these 2 methods with 3.78% and 3.10% respectively. For the last 2 methods, the optical density of the extracts was read at 325 nm.

Conclusion. Our results provide that extracts of aerial parts of A. eupatoria and C. intybus, species from the collection of SPCMP of *Nicolae Testemitanu* SUMPh can serve as sources of phenolic acids.