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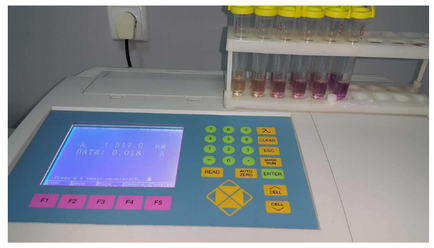
SOURCES OF ANTIOXIDANTS FROM THE COLLECTION FROM THE SCIENTIFIC CENTER OF MEDICINAL PLANTS CULTIVATION "NICOLAE TESTEMITANU"

Maria Cojocaru-Toma[1,2], Cristina Ciobanu[1,2], Anna Benea[1,2], Nicolae Ciobanu[1, 2], Irina Pompuș[2]
[1] Faculty of Pharmacy,
[2] Scientific Center for the Cultivation of Medicinal Plants,
Nicolae Testemitanu SUMPh, Chișinău, Republic of Moldova



Introduction

The increasing interest in natural antioxidants particularly those extracted from medicinal plants has grown in the last few years due to several studies and publications.

Purpose. The evaluation of antioxidant capacity of the medicinal plants: *Agrimonia eupatoria* L., *Cichorium intybus* L., *Cynara scolymus* L., *Rubus fruticosus* L. *Hypericum perforatum* L., species from the collection of the Scientific Center of Medicinal Plants Cultivation.

A.eupatoria L.

C. intibus L.

C. scolymus L.

R. fruticosus L.

H. perforatum L.

Material and methods

The *in vitro* antioxidant activity of hydro-alcoholic extracts (1:10) was evaluated using: 2,2-diphenyl-1-picrylhydrazyl (DPPH), Trolox (6-hydroxy-2,5,7,8- tetramethylchroman-2-carboxylic acid) equivalent antioxidant capacity (TEAC), 2,2′-azinobis (3-ethylbenzthiazoline-6-sulphonic acid) (ABTS) radical and metal chelating activity.

Key-words: medicinal plants, extracts, antioxidants.

Results

Antioxidant properties of extracts of were determined by three methods, DPPH, ABTS and FRAP. Considering the obtained results, the following order in antioxidant activities was established: ***A. eupatoria> C. inthybus> R. frucicosus> H. perforatum> C. scolymus.***

Table 1.

ANIOXIDANT ACTIVITY OF EXTRACTS

Samples	DPPH, IC_{50} µg/ml	ABTS, µM TE/g	FRAP, µM EDTAE/g
Agrimoniae herba	45.55 ±0.01	59.18±0.30	98.07 ±0.003
Cichorii herba	90.79 ±0.04	31.29±0.25	97.25 ±0.012
Cynarae folia	92.27 ±0.1	62.36 ±0.1	68.5±0.6
R.fruticosi fructus	215,44±0,03	14.46±0,27	32.51±0,06
Hyperici herba	19.08±0.12	22.74±0.01	77.36 ±0.05
Trolox	5.02 ±0,008	-	-
EDTA	-	-	99.58

*- not determined, results are presented as the mean of triplicate determinations ± standard deviation

Conclusions

The obtained results justify the continuation of studies, and the evaluated species from the collection of SCMPC can be considered an important local source of natural antioxidants for the pharmaceutical industry.