

Dynamics of Antioxidant and Anti-Radical Activity of the Extracts of Certain Plants of Kazakhstan

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Abstract : In recent years, it achieved some progress such a direction as to study the possibility of correlation between different types of biological activity. In particular, in our work, we consider questions such as: the impact of the qualitative composition of total substances in the example of plant extracts on antioxidant and antiradical activity, the presents of correlation between these types of activity, etc. It is known that there is a relationship between the values of optical density of working solutions of extracts and corresponding bioactivity in vitro, in particular, the antioxidant and hepatoprotective effects. In this study, we have identified that among some studied species of wormwood (*Artemisia viridis* Wild, *Artemisia jacutica* Drob, *Artemisia annua* L, *Artemisia siversiana* Wild, *Artemisia adamsii* Bess, *Artemisia tianschanica*, *Artemisia obtusiloba* Ledeb., *Artemisia heptopotamica*), as well as extracts of *Inula caspica*, *Ajania tenuifolia*, *Abies sibirica*, *Galatella songorica*, *Mentha asiatica* and *Thymus mugodzharcus* it was identified that the highest content of polyphenol compounds is in *Thymus mugodzharcus*. At the same time, we determined the antioxidant and antiradical activity, which was the highest for the *Thymus mugodzharcus*. Butylhydroxyanisole and ascorbic acid were used as comparison substances. Also, it was established that antioxidant and anti-radical activities depend on the concentration of the of all investigated samples. Based on obtained data, we believe that the extract of *Thymus mugodzharcus* can be recommended for further study on the antioxidant and antiradical activity in vivo, as well as the opportunity of this sample to demonstrate hepatoprotective effect. The study was sponsored by SANTO academic program.

Keywords : in vitro, in vivo, antioxidant, hepatoprotective effect

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