

The use of vyazolistnogo labaznik (*Filipendula ulmaria* (L.) Maxim) to increase the antioxidant activity of hepatoprotective collection of plant origin

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Abstract

Currently available on the pharmaceutical market drugs do not fully have high antioxidant activity, so the search for new means to prevent and eliminate liver damage is relevant. The purpose of this study was to evaluate the use of vyazolistnogo labaznik to increase the antioxidant activity of hepatoprotective collections of plant origin. Water extracts of hepatoprotective collection (GPS) have significant antioxidant activity, which is reflected by its linear dependence on the amount of GPS taken for extraction with a confidence value of approximation R^2 of 0.989. Total antioxidant activity (TAA) the collection infusion increased from 0.690 to 4.883 g of rutin (Ru) per 1 dm³ when brewing from 5 g to 40 g of collection per 1 liter of boiling water, while the linear dependence twice reaches the plateau when the amount of collection taken for extraction is 10-12 g and 18-21 g, the TAA of GPS infusions was 1.35±0.004 and 2.26±0.11 g of Ru per 1 dm³. To increase the TAA of the water extract of GPS, an aqueous extract of dried flowers of elmberry (*Filipendula ulmaria* (L.) Maxim) was used, obtained in a similar way. The TAA of water extracts of GPS as the labaznik extract was added increased to its content of 30 % wt., and the effects of synergy (TAA^{excess}) – decreased to 0 (labaznik content of 35 % wt.), passing into antagonism according to the linear equation with a confidence value of approximation R^2 0.981. Comparative tests of water extracts of laburnum flowers and GPS in closed containers for storing biological samples at a temperature of +5 °C in the refrigerator showed that the TAA of water extraction of laburnum flowers in g Ru by 1 dm³ from the number of days of its aging decreases according to the linear equation with the approximation confidence value R^2 0.927, and GPS increases – R^2 0.965.

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