

## The amounts and reactivity of antioxidants extracted from plants of different geographic regions

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### Abstract

There were extracted by ethylacetate the nature antioxidants from leaves and flowers of 8 medicinal plants growing around Chernogolovka (Moscow region) and Goris (Armeniya). Their antioxidant reactivity were estimated using model reaction of initiated oxidation of cumene. The total amount of each antioxidant was estimated and antioxidant reactivity was characterized by the rate constant  $k_7$  of reaction of antioxidant with peroxy radical. The maximum amount of antioxidant was found in extract from leaves of black currant. The highest antioxidant activity demonstrated extracts from leaves of black currant, common oak and horseradish. There was found the temperature dependence of rate constant of reaction of antioxidant with peroxy radical inside the interval 328-348 K. The correlation was found between logarithm of preexponential coefficient and activation energy:  $\lg A \text{ (l/mol}\cdot\text{s)} = 4.65 + 0.15 E \text{ (kJ/mol)}$ .

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