

ANALYSIS OF THUJA (THUJA SPP.) BIOLOGICAL ACTIVITY

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The object of interest for this research were leaves and bark of *Thuja standishii* (Gord.) Carr., *Thuja occidentalis* L. and *Thuja occidentalis* 'Aurescens'. The aim was to measure the quantities of flavonoids and phenolic compounds, the radical scavenging activities, compare the results to find out which parts of the plant and which species produce the most of the compounds, evaluate the effects of storage, allelopathic properties, antifungal and antibacterial activities.

The quantities of the compounds were measured using spectrophotometric methods [1]. The quantities of flavonoids in leaves varied from 1.02 % to 2.36 %, of phenolic compounds in bark from 4.51 % to 8.97 % fraction mass and radical scavenging activity was determined to be from 0.81 % to 1.23 % rutin equivalents in leaves.

Leaves turned out to be the richest part in flavanoids and bark in phenolic compounds. *T.occidentalis* 'Aurescens' had the largest quantities of both of the desired compounds. Radical scavenging activity was highest in the bark of *T. occidentalis*.

The results of other analysis will be presented during the conference.

[1] V. Kaškonienė, G. Ruočkuvienė, P. Kaškonas, I. Akuneca, A. Maruška. 2015, Chemometric analysis of bee pollen based on volatile and phenolic compound compositions and antioxidant properties, *Food Analytical Methods*, 8(5), 1150-1163.