

The chemical composition and antioxidant activity of ethanolic extracts of five moss species are presented in this diploma thesis. The total phenol content was estimated as gallic acid equivalents by the Folin-Ciocalteu reagent method, while the qualitative composition of the extracts were determined by high performance liquid chromatography coupled with photodiode array detection and by gas chromatography – mass spectroscopy detection. The antioxidant properties assessed included iron(III) reduction, 1, 1-diphenyl-2-picrylhydrazyl anion free radical scavenging and the ability of extracts to protect 2-deoxy-D-ribose against hydroxyl radical-mediated degradation was assessed. The extracts contained phenolic compound. Free phenolic acids as benzoic acid derivatives and glycosides as vitexin-like structures. The ethanolic extracts of five moss species demonstrated antioxidant and free radical scavenging activity; however, they were not as potent as the positive control.