

Abstract

Charles University in Prague

Faculty of Pharmacy in Hradec Králové

Department of Pharmacognosy

Candidate: Bc. Hana Studená

Supervisor: Doc. RNDr. Jiřina Spilková, CSc.

Consultant: RNDr. Anna Polášková

Title of diploma thesis: Quality control of herbal drug *Sambuci fructus* from cultivated plants

The main aim of this thesis was to verify the quality of elderberry fruits of the cultivars Sambo, Sambu, Samdal, Samyl and of the wild elderberry according to tests specified in the Czech Pharmacopoeia 2009 and the Czech Pharmaceutical Codex 1. Loss on drying, total ash, ash insoluble in hydrochloric acid were determined. Another aim of this thesis was to compare certain cultivars of elderberry according to the content of anthocyanins in different parts of the fruits. A new modification of the spectrophotometric analysis using the pH-differential method was applied and its linearity and accuracy verified. Further, stability of the samples under given conditions was studied. A loss of anthocyanins content was observed, which was lower than 10 percent. The highest amount of anthocyanins was found in the cultivars Samyl and Samdal, the lowest amount in Sambu and wild elderberry. Although the determined quantities of anthocyanins differed in various parts of the fruit, the amount of anthocyanins in exocarp was always, in all fruits, higher than in the flesh. This fact should be taken into consideration in the processing of fruits for pharmaceutical and food additives purposes.

Key words: *Sambucus nigra*, *Sambuci fructus*, anthocyanins