

Abstract

Charles University

Faculty of Pharmacy in Hradec Králové

Department of Pharmacognosy

Student: Jiří Olšar

Supervisor: doc. PharmDr. Tomáš Siatka, CSc.

Title of diploma thesis: Podophyllotoxin in eastern red cedar (*Juniperus virginiana*)

This thesis describes the optimisation of the extraction process for quantity determination of podophyllotoxin in the leaves of *Juniperus virginiana* L. This determination was conducted through three different methods: the extraction in ultrasound bath, the extraction in the orbital shaker and the maceration in cold environment of 4 °C. Extractions were affected by various factors which were monitored, for instance time of extraction, temperature, and extraction solvents.

The most efficient method appears to be the extraction in ultrasound bath with the use of methanol or a combination of phosphate buffer with ethyl-acetate.