

ABSTRACT

Pelikánová, Eva. Indole alkaloids from the achenes of *Centaurea cyanus* L. (Asteraceae). Hradec Králové, 2025. Diploma thesis. Charles University, Faculty of Pharmacy in Hradec Králové, Department of Pharmacognosy and Pharmaceutical Botany; 70 pages.

The diploma thesis focuses on the phytochemical study of *Centaurea cyanus* L. alkaloids. The aim of this ongoing study was isolation of alkaloids from selected the fraction No. 30–38 and the combined fractions 39–134, which were obtained from chromatography of the alkaloid extract obtained from *Centaurea cyanus* L. achenes. The indole alkaloid adrabbine (EP-1; 8.50 mg) was obtained from fraction 30–38 using preparative TLC. The indole alkaloid EP-2 (2.40 mg) was isolated from fraction No. 39–134 using flash chromatography followed by preparative TLC chromatography. Identification of the alkaloids was carried out using conventional spectroscopic and spectrometric methods (NMR and LC-MS analyses and measurement of optical rotation and circular dichroism – ECD spectra). The absolute configuration of the isolated compounds was not fully resolved at the time of submission of this thesis.

Keywords: *Centaurea cyanus* L., Asteraceae, achenes, indole alkaloids, isolation, circular dichroism