

ABSTRACT

Podlipná, J. **Phytochemical study of *Helianthus annuus* L. IV.** Diploma thesis 2008.

Charles University in Prague, Faculty of Pharmacy in Hradec Králové, 93 pp.

The thesis was focused on phytochemical research of plant *Helianthus annuus* L. The aim of the research was to obtain new information about plant metabolites of sunflower. There was an effort to evaluate the quality of included compounds in sprouts and sunflower seed shells and to divide ethanolic extract from leaves of this plant. Finally the evaluation of biological activity was done from fractions of leaves and shells.

There weren't detected any alkaloids in extract from sprouts. Caffeic acid was detected in sunflower seed shells according to thin-layer chromatography. 80% ethanolic extract from sunflower leaves had significant antioxidant activity which was measured both by DPPH radical and FRAP method. Fat acids were found in fraction No. 14 (from 2nd chromatographic column of extract from leaves). Extract from leaves was toxic for worms *Tubifex tubifex* Müll. but it wasn't phototoxic.