

## **ABSTRACT**

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**Title of dissertation thesis:** Analysis of selected nutraceuticals by liquid chromatography

The extract obtained pellets of *Humulus Lupulus* L. var *Columbus* was subjected to a phytochemical study and isolation of its bitter acid constituents. The summary extract was separated into individual fractions by liquid-liquid extraction.

After performing HPTLC, GC-MS, and LC-MS analysis, the fraction HL-Hex B was selected and purified further by preparative chromatography. A monocomponent pale yellow solid substance of lupulone was obtained after the final preparative separation.

Based on instrumental analysis by reversed phase HPLC with core-shell particles, the analyte was compared to the extract of dietary supplement HopsVital where the presence of bitter acids in the supplement was shown.

**Key words:** nutraceuticals, high performance liquid chromatography, sample preparation, modern stationary phases