

WIU CENTENNIAL HONORS COLLEGE
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Abstract

Poster

Major Forensic Chemistry

Faculty Mentor: Ligu Song

**Quantification of Cannabinol among Sixteen Cannabinoids in Hemp Oil
by Liquid Chromatography Ultraviolet Detection**

Emily Jovanovich

A liquid chromatography ultraviolet detection (LC-UV) method was developed for quantification of cannabinol (CBN) among sixteen cannabinoids in hemp oil. The quantification was achieved using external standard calibration between 0.02 and 25 $\mu\text{g}/\text{mL}$. The limits of quantitation (LOQ) was determined to be 0.008% CBN in hemp oil. To recover CBN, hemp oil was combined with methanol to prepare a 25 mg/mL mixture. After ultrasonication, centrifugation and filtration, the extract was serially diluted to 250 $\mu\text{g}/\text{mL}$ and analyzed by LC-UV. The measurement precision in triplicate was 2.5%. The method is not interfered by other cannabinoids present in hemp oil.