

**Centennial Honors College
Thomas E. Helm Undergraduate Research Day 2024**

ABSTRACT

Major: Chemistry

Poster

Faculty Mentor(s): Liguo Song

**Quantification of Cannabicitran among Nineteen Cannabinoids in Lucky Leaf Hemp Cigarettes by
Liquid Chromatography Ultraviolet Detection**

Brocke Bain

A liquid chromatography ultraviolet detection (LC-UV) method was developed for the quantification of cannabicitran (CBT) among 19 cannabinoids in lucky leaf hemp cigarettes. The quantification was achieved using external standard calibration between 0.02 and 12.5 $\mu\text{g/mL}$. The limits of quantitation (LOQ) were determined to be 0.04% CBT in hemp cigarettes. To recover CBT, a sample was combined with methanol to prepare a 25 mg/mL mixture. After ultrasonication, centrifugation and filtration, the extract was serially diluted to 50 $\mu\text{g/mL}$ and analyzed by LC-UV. The CBT content in the lucky leaf hemp cigarettes sample was measured to be 0.11% with 9.8% relative standard deviation in triplicate. The method is not interfered by other cannabinoids present in hemp cigarettes.