

Centennial Honors College
Thomas E. Helm Undergraduate Research Day 2024

ABSTRACT

Major: Forensic Chemistry

Poster

Faculty Mentor(s): Liguo Song

**Quantification of Cannabidiol among Nineteen Cannabinoids in Key Lime Pie Hemp Flowers by
Liquid Chromatography Ultraviolet Detection**

Maggie Schoener

A liquid chromatography ultraviolet detection (LC-UV) method was developed for the quantification of cannabidiol (CBD) among nineteen cannabinoids in key lime pie hemp flowers. The quantification was achieved using external standard calibration between 0.02 and 25 micrograms/milliliter. The limits of quantification (LOQ) were determined to be 0.04% in hemp flowers. To recover CBD, a sample was combined with methanol to prepare a 25 microgram/milliliter mixture. After ultrasonication, centrifugation, and filtration, the extract was serially diluted to 50 micrograms/milliliter and analyzed by LC-UV. The measurement precision in triplicate was 0.7%. The method is not interfered by other cannabinoids present in hemp flowers.