WIU CENTENNIAL HONORS COLLEGE
Thomas E. Helm Undergraduate Research Day 2023

Abstract

Poster

Major: Forensic Chemistry

Faculty Mentor(s): Liguo Song

Quantification of Δ9-Tetrahydrocannabinol among Nineteen Cannabinoids in Delta 8 Concentrate by Liquid Chromatography Ultraviolet Detection

Jake Provis

A liquid chromatography ultraviolet detection (LC-UV) method was developed for quantification of □9-tetrahydrocannabinol (□9-THC) among nineteen cannabinoids in delta 8 concentrate. The quantification was achieved using external standard calibration between 0.02 and 25 □g/mL. The limits of quantitation (LOQ) were determined to be 0.08% □9-THC in delta 8 concentrate. To recover □9-THC, the sample was combined with methanol to prepare a 25 mg/mL mixture. After ultrasonication, centrifugation and filtration, the extract was serially diluted to 25 □g/mL and analyzed by LC-UV. The measurement precision in triplicate was 13.4%. The method was not interfered by other cannabinoids present in the sample.