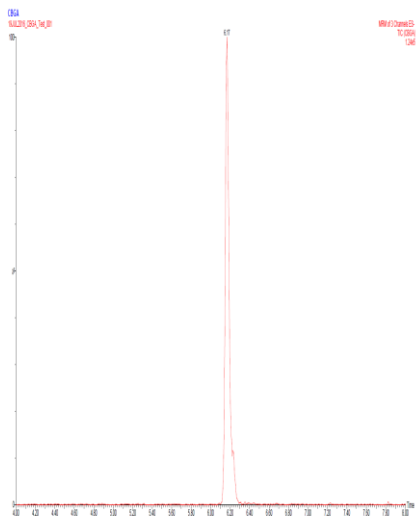


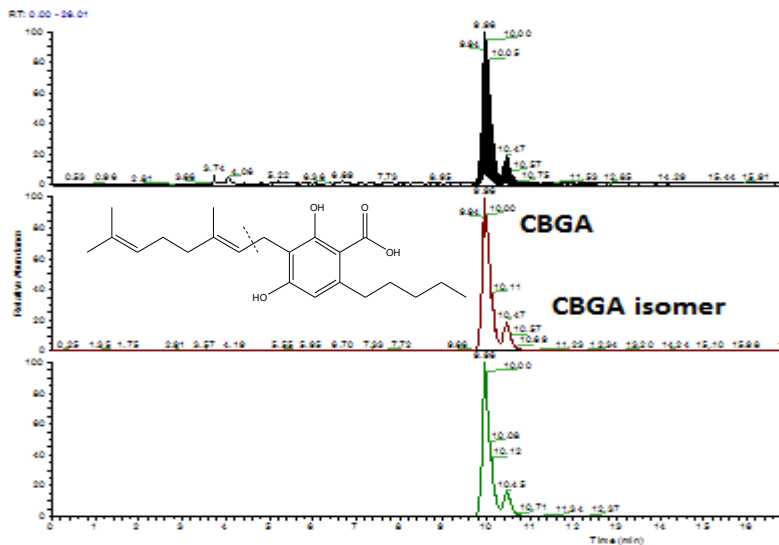
Cannabigerolic Acid (CBGA) and Isomer Analysis by LC-MS/MS

In the process of providing high-purity standards, Cayman Chemical has identified an isomer of cannabigerolic acid (CBGA). With C₁₈ and other HPLC columns, the CBGA and its isomer would elute as one single peak. After working with Nacalai USA using the COSMOCORE Cholester column, the impurity isomer was readily identified by the unique selectivity of the column.

2 μm C18 core-shell – no separation

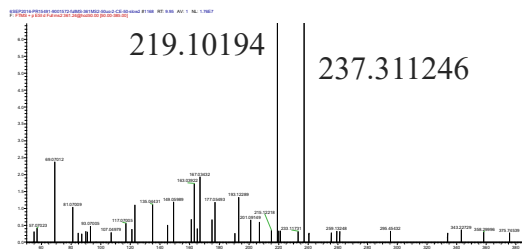


2.6 μm COSMOCORE Cholester – good separation

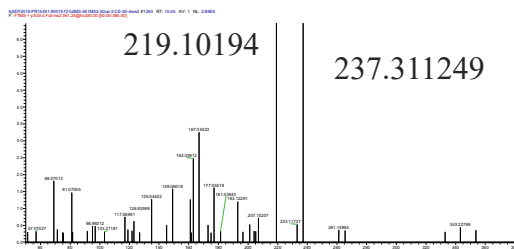


- HPLC Column:** COSMOCORE Cholester 2.1 mm ID x 100 mm, 2.6 μm (Nacalai USA, San Diego, CA)
Mobile Phase A: Water with 0.1% formic acid
Mobile Phase B: Acetonitrile with 0.1% formic acid
Sample: Cannabigerolic Acid (CBGA): 50 ug/mL in 1:1 acetonitrile:water solution
Inj. Volume: 5 μL
Instrument: Dionex Ultimate 3000 coupled with Q-Exactive Orbitrap mass spectrometer (Thermo Scientific)
MS/MS conditions: HRAM full mass followed by data dependent (dd) acquisition of top 2 MS/MS based on an inclusion mass of CBGA (m/z 361.2373)
HRAM Resolution: 140,000; MS/MS isolation width: 1 m/z; collision energy: 50

MS/MS Spectrum of CBGA



MS/MS Spectrum of CBGA Isomer



We appreciate Cayman Chemical (Ann Arbor, MI) for providing the method and data.

