

Supplementary data

: Alteration of compositions in germinated hemp seeds

Evaluation of CBDVA from cheongsam seeds and germinated seed, hemp in Andong city, Korea

- LC-MS/MS

Instrument: Agilent Technologies 6410 Triple Quad (LC-MS/MS)

Column: Unisol C18 (3.0 mm × 150 mm, 3.0 μm)

Solvent: A; 0.1% Formic acid in Water, B; 0.1% Formic acid in Acetonitrile

Flow rate: 0.4 mL/min

Injection vol.: 5 μL

Gradient :

	time(min.)	B%
1	0	70
2	12	100
3	15	100

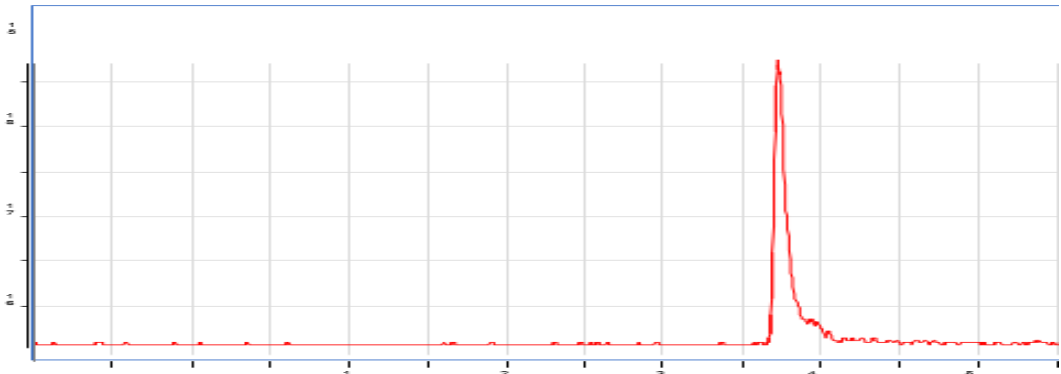
- CBDVA : CAS Number 31932-13-5

- MS condition

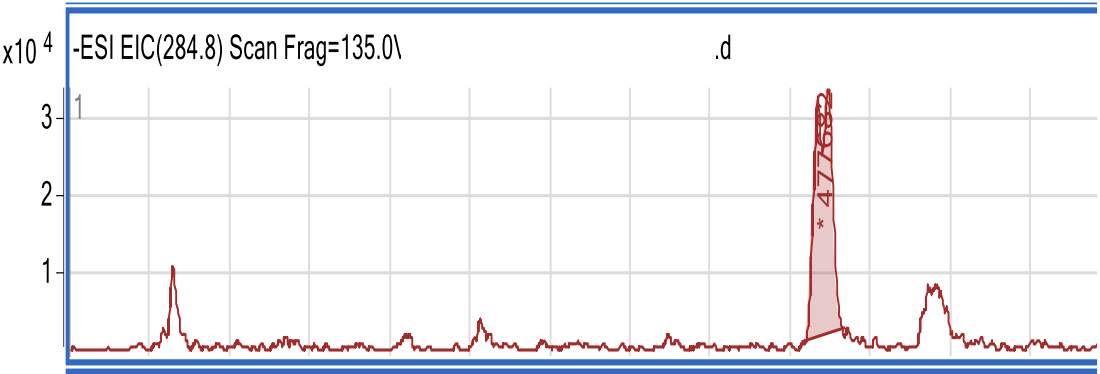
Ionization Mode	-ESI, scan mode
Gas temp.	350 °C
Capillary volt.	4000 V
Nebulizer	40 psig
Fragmentor	135 V

Results

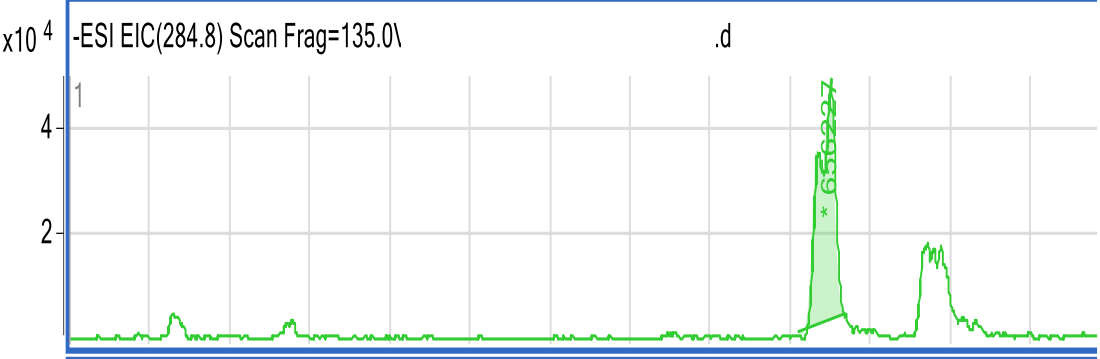
Standard
(CBDVA)



HSE



GHSE



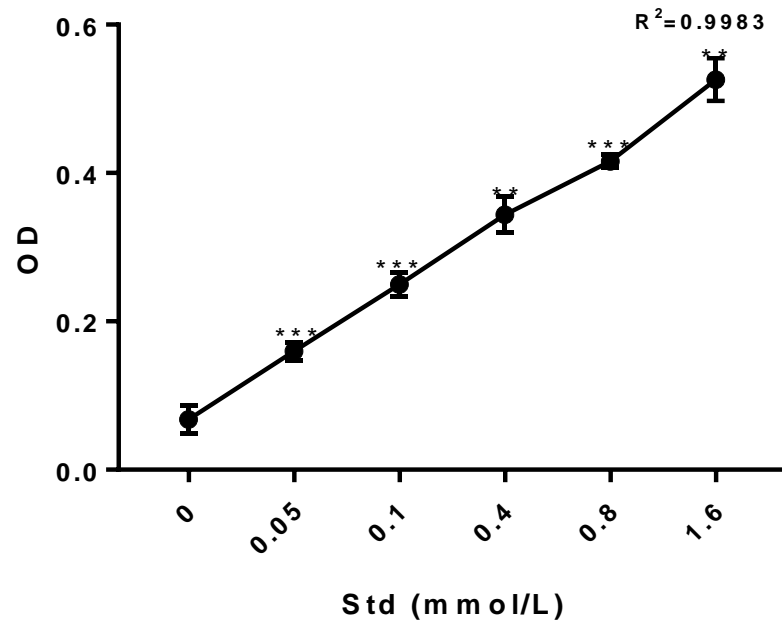
Calibration curve

Compounds	Regression equation	Linear range	Correlation coefficient
		(mg/mL)	(R ²)
CBDVA	$y = 622,021.0959x - 5,764.0411$	0.5-5	1.0000

Results

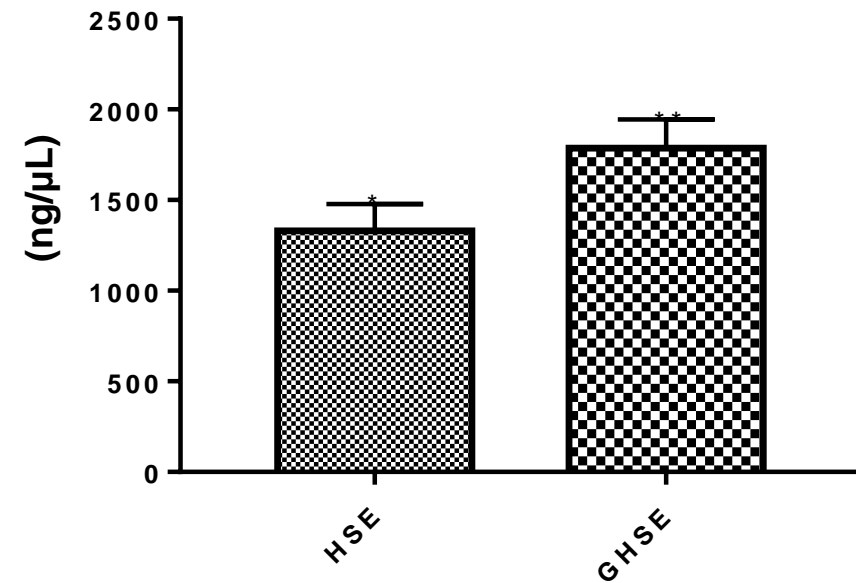
Sample		
	Area	Sample 1mg
HSE	477,682	0.016 mg
GHSE	656,227	0.021 mg

Saponin



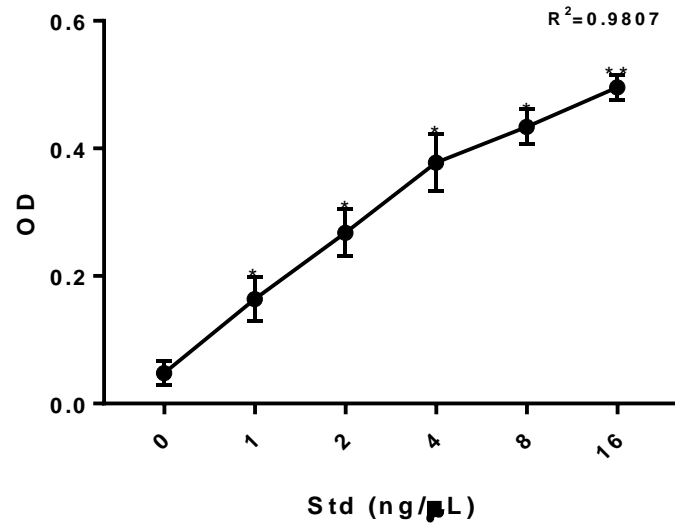
(** $p < 0.01$; *** $p < 0.001$)

OD; optical density



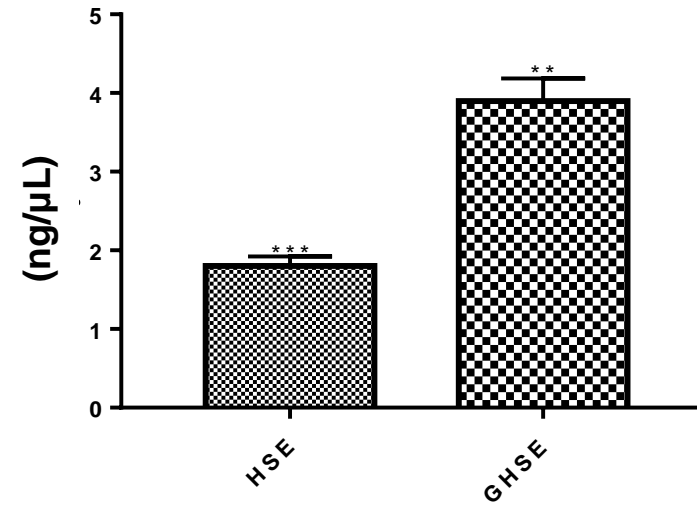
HSE : hemp seed extract (50% ethanol)
GHSE : Germinated hemp seed extract (50% ethanol)

Ferulic acid



(* $p < 0.05$; ** $p < 0.01$)

OD; optical density



HSE : hemp seed extract (50% ethanol)
GHSE : Germinated hemp seed extract (50% ethanol)