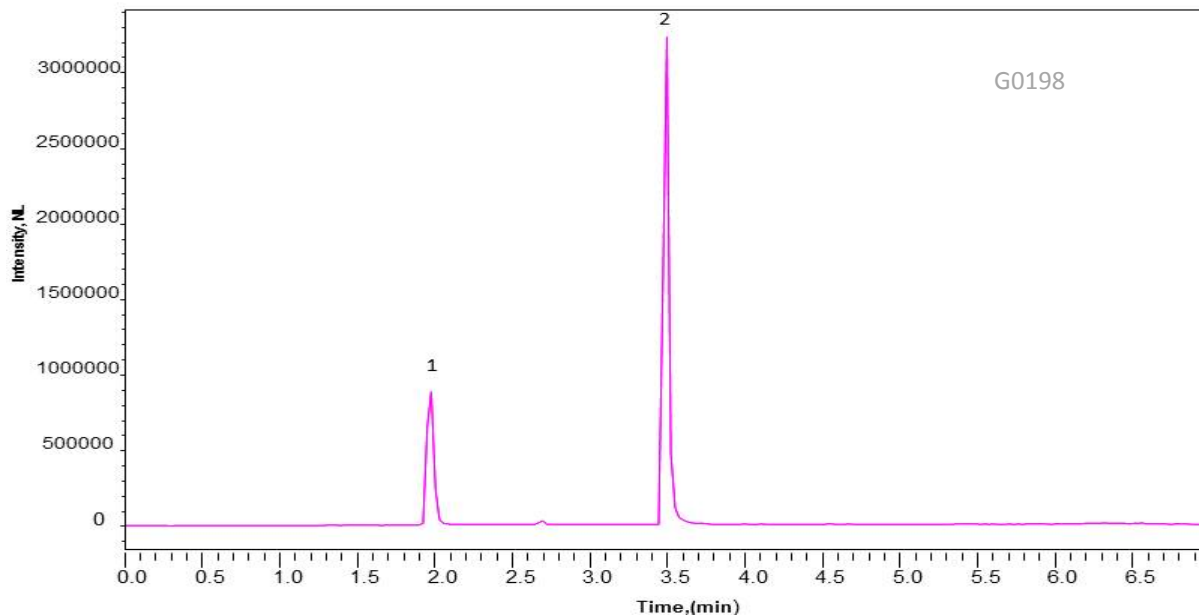


Application Note: 204-TOX

LC-MS Separation of Kratom and its Metabolite on HALO® C18, 2 µm



TEST CONDITIONS:

Column: HALO 90 Å C18, 2 µm, 2.1 x 50mm

Part Number: 91812-402

Mobile Phase A: Water/0.1% Formic acid

Mobile Phase B: ACN/0.1% Formic acid

Gradient:	Time	%B
	0.0	10
	4.00	95
	5.00	95
	5.01	10
	7.00	END

Flow Rate: 0.4 mL/min

Initial Pressure: 315 bar

Temperature: ambient

Injection Volume: 2 µL

Sample Solvent: 95/5 ACN/Water

PEAK IDENTITIES:

1. 7-OH Mitragynine (MH⁺=415.502 g/mol)
2. Mitragynine (MH⁺=399.453 g/mol)

MS CONDITIONS:

LCMS system: Shimadzu LCMS-2020

Detection: +ESI MS

Spray voltage: 4.50 kV

Drying line temp: 300 °C

Heat Block: 450 °C

The 2 µm HALO C18 is an ideal choice for analysis of kratom and its metabolite. Kratom is a herbal extract that comes from the leaves of an evergreen tree (*Mitragyna speciosa*) grown in Southeast Asia. Believed to act on opioid receptors, kratom has been used by people to mitigate the symptoms of opioid withdraw. However, studies on the effects of kratom have identified many safety concerns and no clear benefits, and kratom is not currently regulated by the United States.