

APPLICATION

Extraction and GC/MS Analysis of Cannabinoids from Brownies using roQ™ QuEChERS Extraction Salts and a Zebron™ ZB-5MS_{PLUS}™ GC Column

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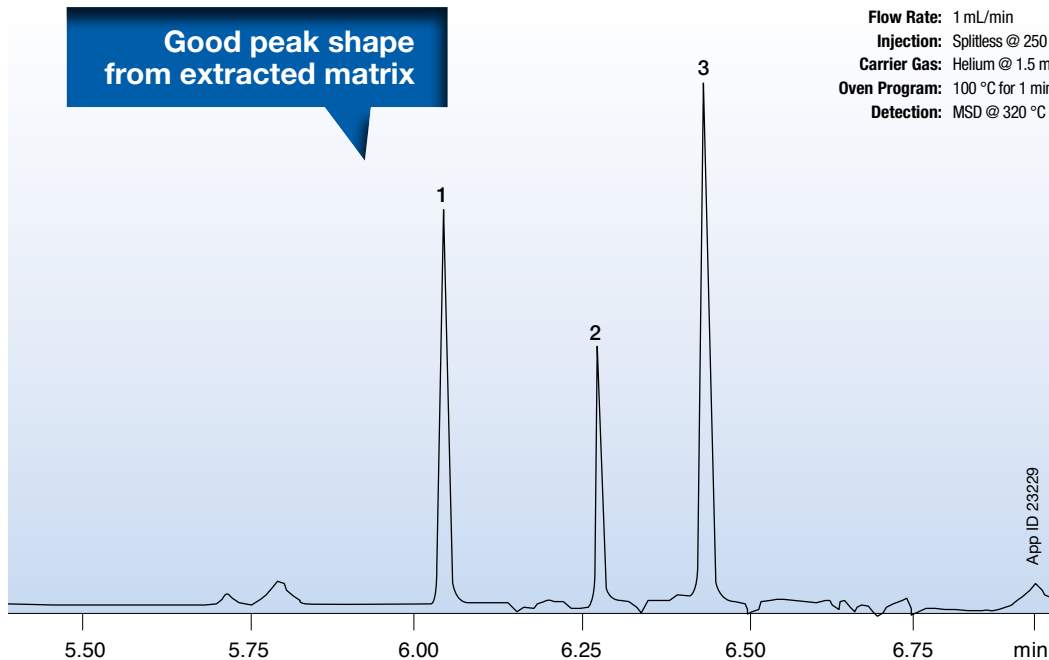
Overview

This application note describes the extraction and GC/MS analysis of cannabinoids from brownies. Using the QuEChERS technique, interferences were removed from the brownie matrix. The resulting clean sample was then analyzed using a specially deactivated Zebron ZB-5MS_{PLUS} GC column, which provided excellent peak shape for 3 cannabinoid compounds.

Analytes

1. Cannabidiol
2. Δ-9-Tetrahydrocannabinol
3. Cannabinol

TIC of Spiked Brownies (1 µg/g)



Extraction Procedure

1. Combine 1 g of chocolate brownie with 10 mL of water in a 50 mL centrifuge tube
2. Shake using a mechanical shaker until dissolved
3. Add roQ QuEChERS EN15662 extraction salt packet (KS0-8909) and 10 mL of acetonitrile
4. Shake tube for 3 min using mechanical shaker
5. Centrifuge at 2700 rpm for 5 min
6. Transfer 1 mL of supernatant to an autosampler vial for GC/MS analysis

Conditions

Column: Zebron ZB-5MS_{PLUS}
Dimensions: 30 meter x 0.25 mm x 0.25 µm
Part No.: 7HG-G030-11
Flow Rate: 1 mL/min
Injection: Splitless @ 250 °C, 1 µL
Carrier Gas: Helium @ 1.5 mL/min (constant flow)
Oven Program: 100 °C for 1 min to 320 °C @ 50 °C/min hold for 2 min
Detection: MSD @ 320 °C



APPLICATION

Ordering Information

Zebron™ ZB-5MSPLUS™ GC Columns

Length (mm)	ID (mm)	Film (µm)	Temp Limits (°C)	Part No.	Part No.	Part No.
					with 5 m Guardian™	with 10 m Guardian™
15	0.25	0.25	-60 to 325/350	7EG-G030-11	—	—
20	0.18	0.18	-60 to 325/350	7FD-G030-08	—	—
	0.18	0.36	-60 to 325/350	7FD-G030-53	—	—
30	0.25	0.25	-60 to 325/350	7HG-G030-11	7HG-G030-11-GGA	7HG-G030-11 -GGC
	0.25	0.50	-60 to 325/350	7HG-G030-17	—	7HG-G030-17-GGC
	0.25	1.00	-60 to 325/350	7HG-G030-22	—	—
	0.32	0.25	-60 to 325/350	7HM-G030-11	—	—
	0.32	1.00	-60 to 325/350	7HM-G030-22	—	—
60	0.25	0.25	-60 to 325/350	7KG-G030-11	—	—



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