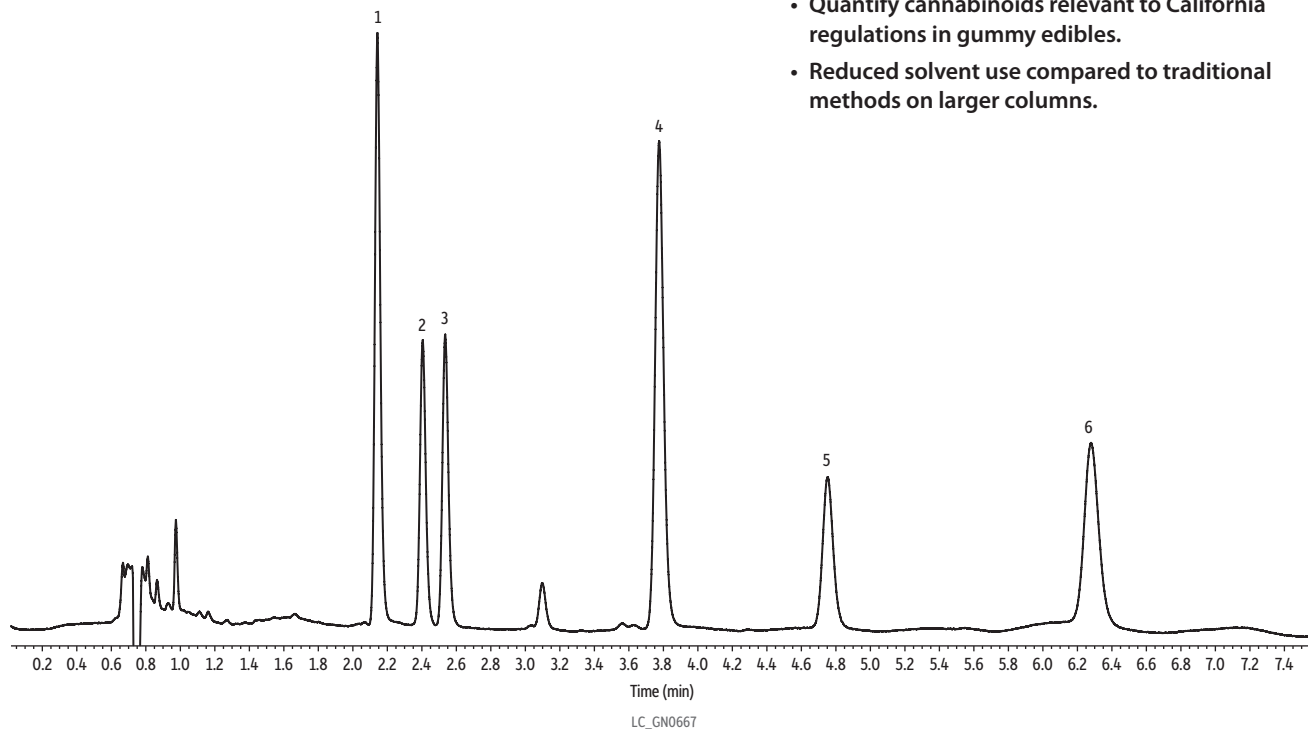


Cannabinoids in Gummy Edibles on Raptor ARC-18



- Quantify cannabinoids relevant to California regulations in gummy edibles.
- Reduced solvent use compared to traditional methods on larger columns.

Peaks	tr (min)	mg/g*
1. Cannabidiolic acid (CBDA)	2.142	0.2
2. Cannabigerol (CBG)	2.405	0.2
3. Cannabidiol (CBD)	2.535	0.2
4. Cannabinol (CBN)	3.776	0.2
5. Δ^9 -Tetrahydrocannabinol (Δ^9 -THC)	4.753	0.2
6. Tetrahydrocannabinolic acid A (THCA-A)	6.279	0.2

*Extract from a gummy sample initially spiked at 0.2 mg/g.

Column	Raptor ARC-18 (cat.# 9314A62)
Dimensions:	150 mm x 2.1 mm ID
Particle Size:	2.7 μ m
Pore Size:	90 \AA
Guard Column:	Raptor ARC-18 EXP guard column cartridge 5 mm, 2.1 mm ID, 2.7 μ m (cat.# 9314A0252)
Temp.:	30 °C
Standard/Sample	Cannabinoids standard (cat.# 34014) Cannabigerol (cat.# 34091) d9-Tetrahydrocannabinol (cat.# 34067) d9-Tetrahydrocannabinolic acid A (cat.# 34111)
Diluent:	75:25 Acetonitrile:water
Conc.:	Expected concentration of 4 ppm in final extract from gummy initially spiked at 0.2 mg/g.
Inj. Vol.:	2 μ L
Mobile Phase	
A:	Water, 5 mM ammonium formate, 0.1% formic acid
B:	Acetonitrile, 0.1% formic acid

Time (min)	Flow (mL/min)	%A	%B
0.00	0.4	25	75
10.00	0.4	25	75

Detector	UV/Vis @ 228 nm
Instrument	UHPLC
Sample Preparation	Gummies were manually chopped into small pieces, and 1 g of sample was weighed in a 50 mL polypropylene tube. The sample was mixed with 5 mL of water and then vigorously vortexed until all gummy pieces were fully solubilized. The sample was fortified with cannabinoids at 0.2 mg/g. The spiked sample was further vortexed for 30 sec. 5 mL of acetonitrile acidified with 1% acetic acid was added to the sample, and this was followed by 30 sec vortex agitation. Then, a pouch of European EN 15662 QuEChERS extraction salts (cat.# 25849) was added to the sample. The sample was vortexed for 30 sec and then centrifuged for 5 min. 100 μ L of organic extract was mixed with 900 μ L of 75:25 acetonitrile:water. 2 μ L of final extract was injected into the HPLC-UV system.