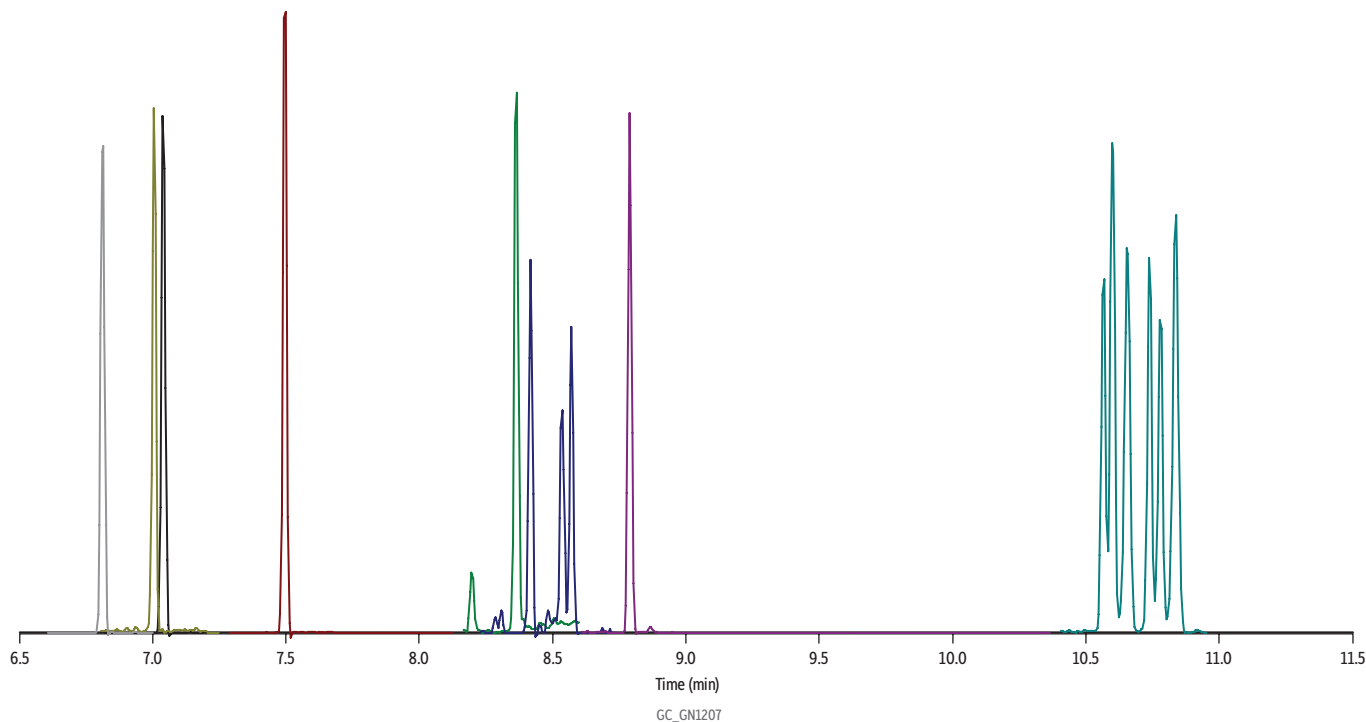


GC Amenable Pesticides Regulated by California in Gummy Edibles on Rxi-5ms

- GC amenable pesticides regulated by California (2020).
- Quantify pesticides in cannabis edibles at low ng/g concentrations.



GC_GN1207

Peaks	tr (min)	Polarity	Precursor Ion	Product Ion	Transition Type
1. Atrazine-d5	6.82	Positive	220.0	58.0	Quantifier
2. Atrazine-d5	6.82	Positive	205.0	127.0	Qualifier
3. Diazinon-d10 (diethyl-d10)	7.01	Positive	183.0	139.0	Quantifier
4. Diazinon-d10 (diethyl-d10)	7.01	Positive	183.0	168.0	Qualifier
5. Quintozene	7.03	Positive	294.9	236.9	Quantifier
6. Quintozene	7.03	Positive	236.8	118.9	Qualifier
7. Methyl parathion	7.50	Positive	263.0	109.0	Quantifier
8. Methyl parathion	7.50	Positive	263.0	79.0	Qualifier
9. Captan	8.37	Positive	184.0	149.1	Quantifier
10. Captan	8.37	Positive	184.0	134.1	Qualifier
11. trans-Chlordane	8.41	Positive	271.9	237.0	Quantifier
12. trans-Chlordane	8.41	Positive	372.9	265.9	Qualifier
13. cis-Chlordane	8.53	Positive	372.9	265.9	Quantifier
14. cis-Chlordane	8.53	Positive	271.9	237.0	Qualifier
15. Chlorfenapyr	8.80	Positive	247.1	227.1	Quantifier
16. Chlorfenapyr	8.80	Positive	59.1	31.1	Qualifier
17. Cyfluthrin	10.61	Positive	226.0	206.0	Quantifier
18. Cyfluthrin	10.61	Positive	163.0	127.0	Qualifier
19. Cypermethrin	10.87	Positive	163.0	127.1	Quantifier
20. Cypermethrin	10.87	Positive	181.1	152.1	Qualifier

Column Standard/Sample
 Rxi-5ms, 30 m, 0.25 mm ID, 0.25 µm (cat.# 13423)
 California pesticide standard #1 (cat.# 34124)
 California pesticide standard #2 (cat.# 34125)
 California pesticide standard #3 (cat.# 34126)
 California pesticide standard #4 (cat.# 34127)
 California pesticide standard #5 (cat.# 34128)
 California pesticide standard #6 (cat.# 34129)
 Atrazine-d5 (cat.# 31984)
 Diazinon-d10 (cat.# 31986)

Diluent: Acetonitrile
Conc.: 2.5-10 ng/mL. Expected concentration range in extract after extracting from gummy fortified at 100 ng/g (final extract was diluted in half with acetonitrile).

Injection
Inj. Vol.: 1 µL splitless
Liner: Topaz 4.0 mm ID single taper inlet liner w/wool (cat.# 23447)
Inj. Temp.: 250 °C
Purge Flow: 5 mL/min

Oven
Oven Temp.: 90 °C (hold 1 min) to 310 °C at 25 °C/min (hold 10 min)

Carrier Gas
 He, constant flow

Flow Rate: 1.4 mL/min

Detector
 MS/MS

Transfer Line Temp.: 290 °C

Analyzer Type: Quadrupole

Source Temp.: 330 °C

Electron Energy: 70 eV

Tune Type: PFTBA

Ionization Mode: EI

Instrument Sample Preparation
 Thermo Scientific TSQ 8000 Triple Quadrupole GC-MS
 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 pesticides and mycotoxins at 100 ng/g. A mix of internal standards was added at 200 ng/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. 1.9 mL of supernatant was transferred to a Q-sep QuEChERS dSPE tube containing pre-weighed magnesium sulfate, PSA, and GCB (cat.# 26217). After vortexing and centrifuging, 500 µL of extract was mixed with 500 µL of acidified acetonitrile. 1 µL of final extract was injected into the GC-MS/MS system.