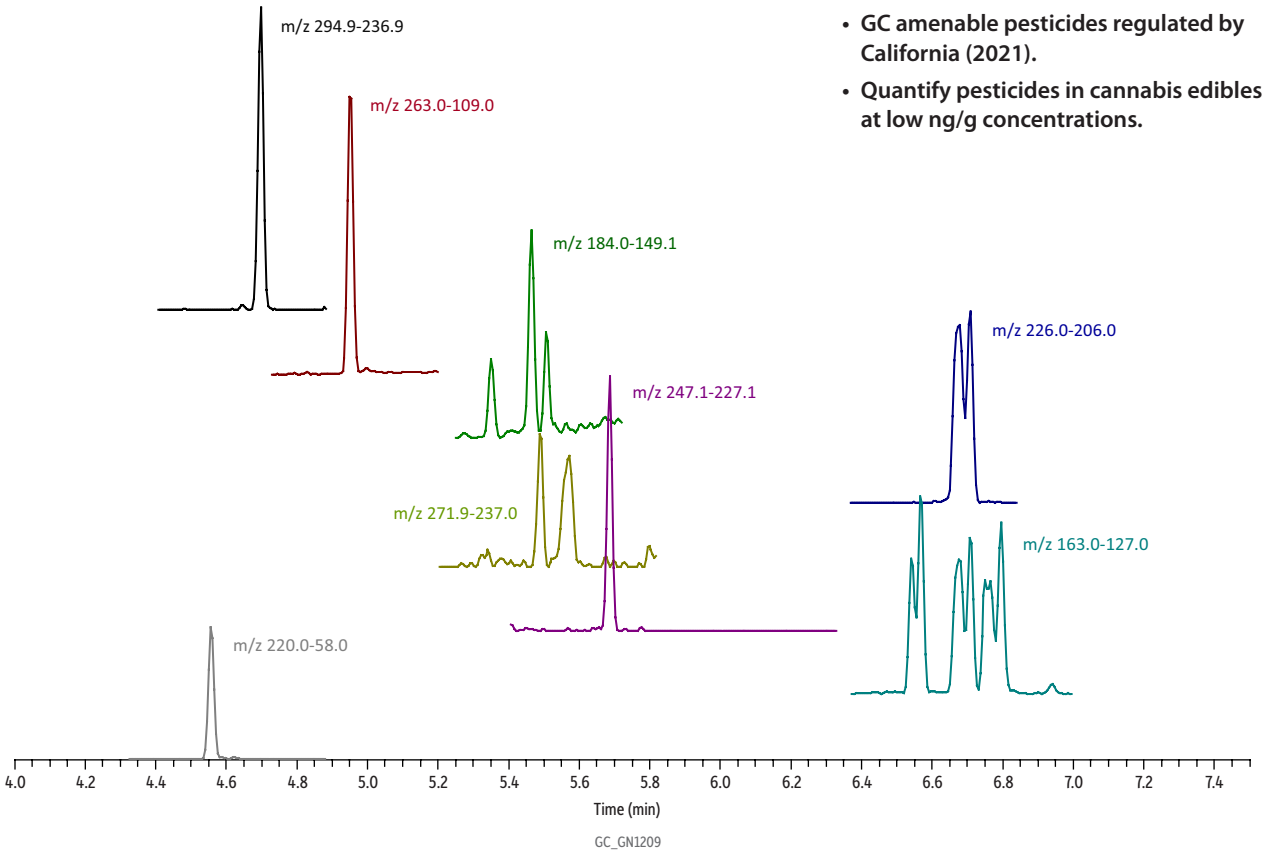
GC-Amenable Pesticides Regulated by California in Chocolate on Low-Pressure GC (LPGC) Column Kit



- GC amenable pesticides regulated by California (2021).
- Quantify pesticides in cannabis edibles at low ng/g concentrations.

Peaks	t_R (min)	Polarity	Precursor Ion	Product Ion	Transition Type
1. Atrazine-d5	4.57	Positive	220.0	58.0	Quantifier
2. Atrazine-d5	4.57	Positive	205.0	127.0	Qualifier
3. Quintozene	4.70	Positive	294.9	236.9	Quantifier
4. Quintozene	4.70	Positive	236.8	118.9	Qualifier
5. Methyl parathion	4.96	Positive	263.0	109.0	Quantifier
6. Methyl parathion	4.96	Positive	263.0	79.0	Qualifier
7. Captan	5.47	Positive	184.0	149.1	Quantifier
8. Captan	5.47	Positive	184.0	134.1	Qualifier
9. *trans*-Chlordane	5.48	Positive	271.9	237.0	Quantifier
10. *trans*-Chlordane	5.48	Positive	372.9	265.9	Qualifier
11. *cis*-Chlordane	5.56	Positive	372.9	265.9	Quantifier
12. *cis*-Chlordane	5.56	Positive	271.9	237.0	Qualifier
13. Chlorfenapyr	5.69	Positive	247.1	227.1	Quantifier
14. Chlorfenapyr	5.69	Positive	59.1	31.1	Qualifier
15. Cyfluthrin	6.71	Positive	226.0	206.0	Quantifier
16. Cyfluthrin	6.71	Positive	163.0	127.0	Qualifier
17. Cypermethrin	6.80	Positive	163.0	127.1	Quantifier
18. Cypermethrin	6.80	Positive	181.1	152.1	Qualifier

Column	Low-pressure GC column kit (factory-coupled restrictor column [5 m x 0.18 mm ID] and Rtx-5ms analytical column [15 m, 0.53 mm ID, 1 µm plus 1 m integrated transfer line on the outlet end]) (cat.# 11800)
Standard/Sample	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)
Diluent:	Acetonitrile
Conc.:	5.8-8.4 ng/mL Expected concentration range (70-100% recovery) in extract after extracting from chocolate fortified at 100 ng/g (final extract was diluted in half with acidified 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.:	80 °C (hold 1 min) to 330 °C at 45 °C/min (hold 5.5 min)
Carrier Gas	He, constant flow
Flow Rate:	2.0 mL/min
Detector	MS/MS
Transfer Line Temp.:	290 °C
Analyzer Type:	Quadrupole
Source Temp.:	325 °C
Electron Energy:	70 eV
Tune Type:	PFTBA
Ionization Mode:	EI
Instrument	Thermo Scientific TSQ 8000 Triple Quadrupole GC-MS
Sample Preparation	Chocolate was pulverized using a SPEX Freezer/Mill grinder, and 0.5 g sample was fortified with pesticides and mycotoxins at 100 ng/g. A mix of internal standards was added at 200 ng/g. Then, 0.5 mL of isopropyl alcohol was added to the sample. The sample was vortexed for 10 sec or until a homogenous mixture was obtained. Afterwards, 2.5 mL of acetonitrile acidified with acetic acid at 1% v/v was added to the vial. Once again, the mixture was vortexed for 30 sec, and then centrifuged for 5 min at 4300 ×g at room temperature. A total of 2 mL of the supernatant was passed through 100 mg Resprep C18 SPE cartridge (cat.# 26030). 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.

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