

# APPLICATION

## 65 California Pesticides Analysis from Cannabis by LC-MS/MS using Luna<sup>®</sup> Omega Polar C18 LC Column

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### Overview

As cannabis consumption increases, so are the risk of pesticides consumption at harmful levels. The California list covers a wide range of pesticides with diverse chemical properties. The LC-MS/MS method detailed here makes use of sample prep dilution with a reversed phase HPLC column allowing increased resolving power for the multiresidue pesticides of interest.

### Sample Preparation

1. 1 gram of homogenized flower or 0.02 grams of concentrate is vortexed in 10 mL of Acetonitrile
2. Sonicate for 15 minutes
3. Winterization at -20 °C or lower for at least 2 hours
4. Centrifuge at 4000 rpm
5. Injection volume of 2 µL for LC-MS/MS analysis

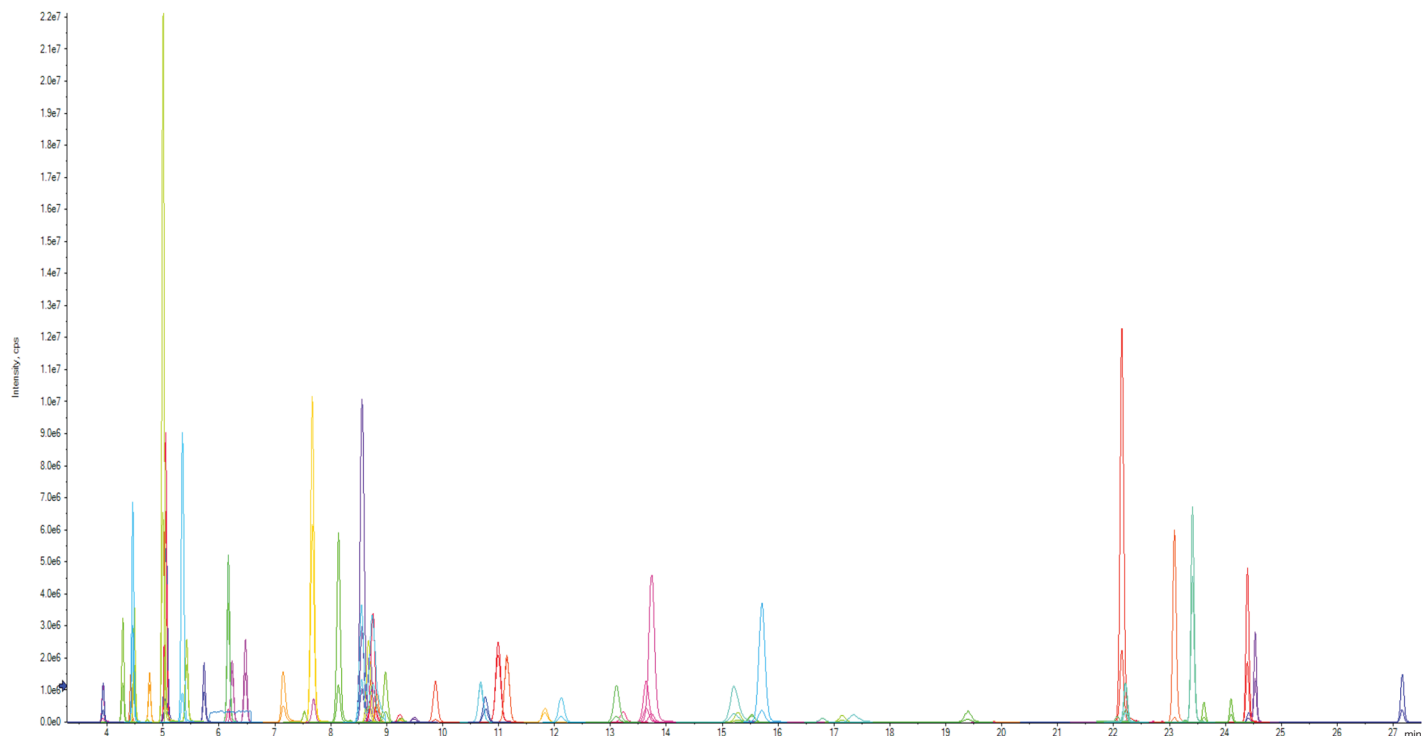
### LC-MS/MS Method

**Column:** Luna Omega 3 µm Polar C18  
**Dimension:** 150 x 4.6 mm  
**Part No.:** 00F-4760-E0  
**Mobile Phase:** A: 5 mM Ammonium acetate + 0.1% Formic acid  
 B: Methanol/Water (98:2) + 5 mM Ammonium acetate

Gradient	Time (min)	% B
	0	10
	2	60
	3	65
	4	70
	18	80
	20	88
	22	95
	27	100
	28	100
	28.1	10
	30	10

**Flow Rate:** 0.8 mL/min  
**Injection:** 2 µL  
**Temperature:** 30 °C  
**Detection:** MS/MS  
**Instrument:** SCIEX QTRAP<sup>®</sup> 6500+ with DuoSpray APCI/ESI  
**Analytes:** For full list search APP ID 24863

### Standards Chromatogram



App ID 24863

# APPLICATION

## Luna<sup>®</sup> Omega Ordering Information

### 1.6 µm Minibore Columns (mm)

Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
<b>Polar C18</b>	00A-4748-AN	00B-4748-AN	00D-4748-AN	00F-4748-AN	AJO-9505 for 2.1 mm ID

### SecurityGuard<sup>™</sup> ULTRA Cartridges<sup>†</sup>

### 3 µm Minibore and Midbore<sup>™</sup> Columns (mm)

Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	50 x 3.0	100 x 3.0	150 x 3.0	4 x 2.0*
<b>Polar C18</b>	00A-4760-AN	00B-4760-AN	00D-4760-AN	00F-4760-AN	00B-4760-YO	00D-4760-YO	00F-4760-YO	AJO-7600 for ID: 2.0 - 3.0 mm

### SecurityGuard Cartridges (mm)

### 3 µm Analytical Columns (mm)

Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 3.0*
<b>Polar C18</b>	00B-4760-E0	00D-4760-E0	00F-4760-E0	00G-4760-E0	AJO-7601 for ID: 3.2-8.0 mm

### SecurityGuard Cartridges (mm)

<sup>†</sup> SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000  
<sup>\*</sup> SecurityGuard Analytical Cartridges require holder, Part No.: KJO-4282

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## Pesticide List

Category I	Category II
Aldicarb	Abamectin
Carbofuran	Acephate
Chlordane	Acequinocyl
Chlorfenapyr	Acetamiprid
Chlorpyrifos	Azoxystrobin
Coumaphos	Bifenazate
Daminozide	Bifenthrin
Dichlorvos	Boscalid
Dimethoate	Captan
Ethoprophos	Carbaryl
Erofenoprox	Chlorantraniliprole
Fipronil	Clofentezine
Imazalil	Cyfluthrin
Methiocarb	Cypermethrin
Methyl Parathion	Diazinon
Mevinphos	Dimethomorph
Pacllobutrazol	Etoxazole
Propoxur	Fenhexamid
Spiroxamine	Fenpyroximate
Thiacloprid	Fonicamid
	Fludioxonil
	Hexythiazox
	Imidacloprid
	Kreosim-methyl
	Malathion
	Metalaxyl
	Methomyl
	Myclobutanil
	Naled
	Oxamyl
	Pentachloronitrobenzene
	Permethrins
	Phosmet
	Piperonyl Butoxide
	Prallethrin
	Propiconazole
	Pyrethrins
	Pyridaben
	Spinosad
	Spiromesifen
	Spirotetramat
	Tebuconazole
	Thiamethoxam
	Trifloxystrobin



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