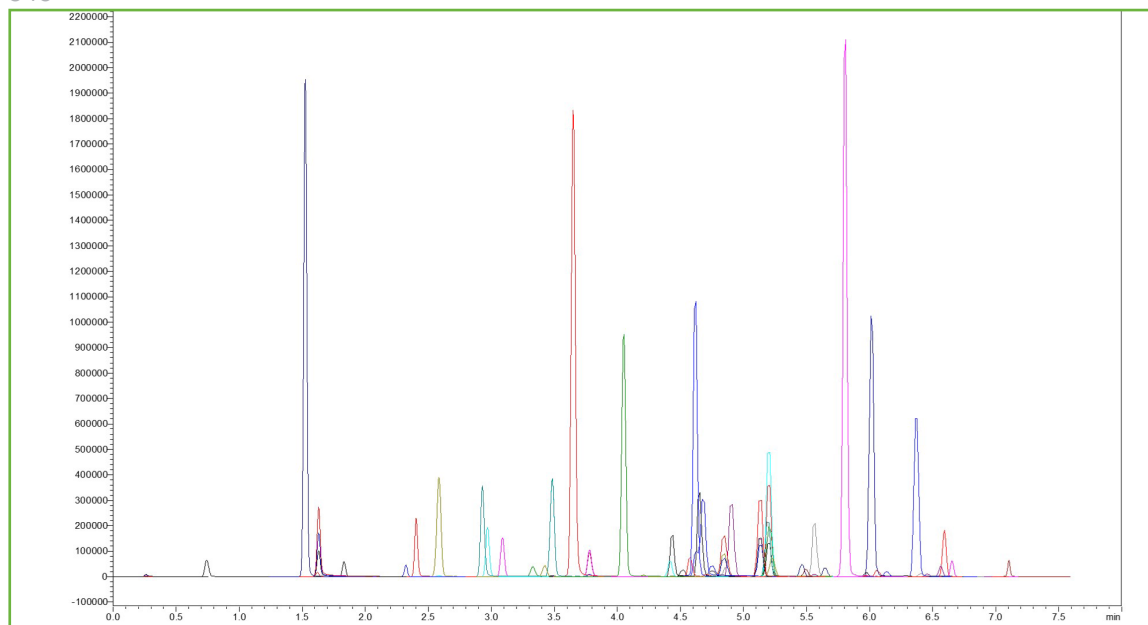




LC-MS Analysis of the Oregon Pesticide Mix on HALO® PCS C18

346



TEST CONDITIONS:

Column: HALO 90 Å PCS C18 , 2.7 µm, 2.1 x 50 mm

Part Number: 92812-417

Mobile Phase A: Water with 0.1% Formic Acid

Mobile Phase B: Methanol with 0.1% Formic Acid

Gradient:	Time	%B
	0.00	5
	6.65	100
	8.00	100
	8.50	5
	12.00	5

Flow Rate: 0.5 mL/min

Pressure: 237 bar

Temperature: 35 °C

Injection Volume: 1 µL

Sample: Oregon Pesticide Mixture 10x Action Limit
2-20 µg/mL in ACN from LGC (DRE-GA09000244AL)

diluted 30 µL in 120 µL of Mobile Phase A

Sample Solvent: 80/20 Mobile Phase A/ACN

LC System: Shimadzu Nexera X2

MS CONDITIONS:

System: Shimadzu 8040

Detection Mode: ESI + and -

Spray Voltage: 4.5 kV

Nebulizer Gas Flow: 2 L/min

DL Temperature: 250 °C

Heat Block Temperature: 400 °C

Drying Gas Flow: 15 L/min

Tubing Optimization:

Column outlet to Ground: AMT MarvelXACT™ PEEKsil™

75 µm ID x 600 mm

Part Number: PS7075600

Ground to Source: AMT MarvelXACT™ PEEKsil™

75 µm ID x 150 mm

Part Number: PS7075150

Screening for pesticides is required for cannabis testing in Oregon. The Oregon pesticide list consists of 59 compounds and 2 of these are isomers (spinosad A and D and pyrethrin I and II). All of the compounds were run using positive ESI except fludioxinil and fipronil, which were run in negative mode since it is easier for these compounds to be oxidized. A HALO® PCS C18 column is used to highlight the symmetrical peak shapes obtained when using formic acid modified mobile phase. The entire analysis including re-equilibration is 12 minutes, which highlights the speed of Fused-Core® analysis.



AMT_AN_Rev_0



Peak #	Compound	m/z transition	Retention Time (min)
1	Daminozide	161.1000>143.1000	0.26
2	Acephate	184.1000>143.1000	0.74
3	Oxamyl	237.1000>72.1000	1.52
4	Methomyl	163.1000>88.1000	1.62
5	Flonicamid	230.1000>203.1000	1.63
6	Thiamethoxam	292.1000>132.1000	1.83
7	Imidacloprid	256.1000>175.1000	2.32
8	Dimethoate	230.1000>125.1000	2.40
9	Acetamiprid	223.1000>126.1000	2.59
10	Aldicarb	208.1000>89.1000	2.93
11	Thiacloprid	253.1000>126.1000	2.97
12	Parathion methyl	264.2000>232.1000	3.06
13	Imazalil	297.1000>159.1000	3.09
14	Dichlorvos	221.1000>109.1000	3.33
15	Propoxur	210.1000>111.1000	3.42
16	Carbofuran	222.1000>165.1000	3.48
17	Spiroxamine	298.1000>144.1000	3.65
18	Carbaryl	202.1000>145.1000	3.78
19	Spinosad D	746.5000>142.1000	3.92
20	Metalaxyl	280.2000>220.1000	4.05
21	Naled	381.1000>127.1000	4.21
22	Chlorantraniliprole	481.9000>283.9000	4.42
23	Phosmet	318.1000>160.1000	4.43
24	Azoxystrobin	404.1000>344.1000	4.52
25	Methiocarb	226.1000>121.1000	4.58
26	Spinosad A	732.6000>142.1000	4.62
27	Paclobutrazol	294.1000>70.2000	4.65
28	Malathion	331.1000>99.1000	4.68
29	Boscalid	343.1000>307.1000	4.71
30	Myclobutanil	289.1000>69.9000	4.75
31	Fludioxinil	246.6000>125.9000	4.75





Peak #	Compound	m/z transition	Retention Time (min)
32	Spirotetramat	374.1000>330.1000	4.85
33	Ethoprophos	243.1000>130.9000	4.86
34	Bifenazate	301.1000>170.2000	4.90
35	Fenoxycarb	302.1000>116.1000	5.13
36	Kresoxim-methyl	314.1000>116.1000	5.14
37	Diazinon	305.1000>169.1000	5.19
38	Fipronil	434.7000>330.3000	5.20
39	Tebuconazole	308.2000>70.1000	5.21
40	Propiconazole	342.1000>69.1000	5.23
41	MGK 264	276.1000>210.1000	5.46
42	Clofentezine	303.1000>138.1000	5.50
43	Prallethrin	301.2000>133.1000	5.51
44	Chlorfenapyr	409.2000>59.0000	5.56
45	Trifloxystrobin	409.1000>186.1000	5.56
46	Pyrethrin II	373.2000>161.1000	5.60
47	Piperonyl butoxide	356.2000>177.1000	5.81
48	Chlorpyrifos	351.9000>124.9000	5.97
49	Hexythiazox	353.1000>228.1000	5.98
50	Etoxazole	360.2000>141.1000	6.02
51	Spiromesifen	388.2000>273.1000	6.06
52	Pyrethrin I	329.1000>161.1000	6.11
53	Fenpyroximate	422.2000>366.1000	6.14
54	Cyfluthrin	451.1000>191.1000	6.23
55	Cypermethrin	433.1000>191.0000	6.29
56	Pyridaben	365.2000>147.1000	6.37
57	Abamectin	890.7000>305.3000	6.41
58	Permethrin	408.1000>183.1000	6.57
59	Etofenprox	394.3000>177.1000	6.59
60	Bifenthrin	440.1000>166.2000	6.65
61	Acequinocyl	343.2000>189.1000	7.11

