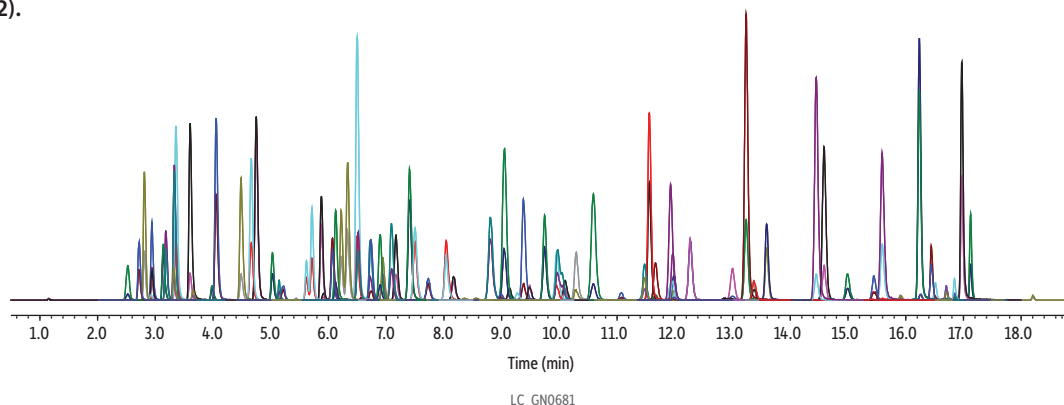


# Canadian Pesticide Standards on Raptor ARC-18

- LC-amenable pesticides regulated by Canada (2022).



Peaks	tr (min)	Precursor Ion	Product Ion 1	Product Ion 2	Polarity	Peaks	tr (min)	Precursor Ion	Product Ion 1	Product Ion 2	Polarity
1. Daminozide	1.2	161.1	143.2	44.1	+	49. Tetrachlorvinphos	9.0	365.1	127.2	204.0	+
2. Acephate	2.5	184.0	143.1	95.1	+	50. Tebufenozide	9.0	353.2	133.2	297.2	+
3. Dinotefuran	2.7	203.2	129.3	73.1	+	51. Kresoxim-methyl	9.1	314.2	267.2	222.2	+
4. Oxamyl	2.8	237.1	72.1	90.1	+	52. Fenthion	9.3	279.0	247.3	138.4	+
5. Flonicamid	2.9	230.1	203.1	174.1	+	53. Tebuconazole	9.4	308.1	70.1	125.1	+
6. Methomyl	2.9	163.1	88.1	106.1	+	54. Benzovindiflupyr	9.5	398.2	378.0	322.1	+
7. Thiamethoxam	2.9	292.0	211.1	181.1	+	55. Diazinon	9.7	305.1	169.2	153.2	+
8. Imidacloprid	3.1	256.1	209.1	175.1	+	56. Coumaphos	10.0	363.1	227.1	307.1	+
9. Clothianidin	3.2	250.1	169.2	132.3	+	57. Propiconazole	10.0	342.0	159.0	69.2	+
10. Mevinphos I	3.3	225.1	127.1	193.2	+	58. Clofentezine	10.1	303.0	138.1	102.1	+
11. Dimethoate	3.3	230.0	199.1	125.1	+	59. Pyraclostrobin	10.3	388.2	194.4	163.4	+
12. Acetamiprid	3.4	223.0	126.1	56.1	+	60. Spinosad (Spinosyn A)	10.6	732.4	142.2	98.1	+
13. Thiacloprid	3.6	253.0	126.0	90.1	+	61. MGK-264 I	11.1	276.2	210.1	121.1	+
14. Mevinphos II	3.7	225.1	127.1	193.2	+	62. Prallethrin	11.5	301.2	123.2	104.9	+
15. Aldicarb	4.0	208.4	116.0	89.0	+	63. Trifloxystrobin	11.6	409.2	186.1	145.1	+
16. Pirimicarb	4.1	239.2	72.1	182.3	+	64. Spinosad (Spinosyn D)	11.7	746.5	142.3	98.4	+
17. Thiophanate-methyl	4.5	343.1	151.3	311.2	+	65. Spinetoram (Spinosyn J)	11.9	748.5	142.5	98.3	+
18. Dichlorvos	4.6	220.9	108.8	79.2	+	66. Novaluron	12.0	493.2	158.1	140.9	+
19. Propoxur	4.7	210.1	111.1	93.1	+	67. Pyrethrins (Pyrethrin II)	12.0	373.1	161.1	133.2	+
20. Carbofuran	4.7	222.1	123.1	165.2	+	68. MGK-264 II	12.0	276.2	210.1	121.1	+
21. Carbaryl	5.0	202.1	145.1	127.1	+	69. Buprofezin	12.3	306.2	201.4	57.1	+
22. Imazalil	5.1	297.0	159.0	201.0	+	70. Teflubenzuron	12.4	379.0	338.9	196.1	-
23. Cyantraniliprole	5.2	475.1	285.9	444.2	+	71. Spinetoram (Spinosyn L)	13.0	760.5	142.2	98.1	+
24. Azadirachtin	5.4	703.4	567.3	585.3	+	72. Piperonyl butoxide	13.2	356.3	177.2	119.2	+
25. Dodemorph	5.7	282.3	116.2	98.1	+	73. Chlorpyrifos	13.4	349.9	198.0	97.1	+
26. Metalaxyl	5.9	280.2	220.2	192.2	+	74. Allethrin	13.4	303.3	135.3	123.2	+
27. Naled	5.9	397.8	127.1	109.1	+	75. Hexythiazox	13.6	353.1	228.1	168.1	+
28. Chlorantraniliprole	6.1	483.9	452.9	285.9	+	76. Etoxazole	14.5	360.2	141.1	304.2	+
29. Phosmet	6.1	318.0	160.1	77.2	+	77. Spiromesifen	14.6	388.4	273.3	255.3	+
30. Spiroxamine	6.3	298.3	144.2	100.2	+	78. Pyrethrins (Pyrethrin I)	15.0	329.2	161.2	133.2	+
31. Azoxystrobin	6.5	404.0	372.1	344.1	+	79. Cyfluthrin	15.2	451.1	191.2	191.2	+
32. Methiocarb	6.5	226.1	169.1	121.1	+	80. Cyfluthrin (qualifier)	15.2	453.1	193.2	193.2	+
33. Fludioxonil	6.6	274.0	180.0	126.0	-	81. Spirodiclofen	15.5	411.2	71.2	43.4	+
34. Dimethomorph I	6.7	388.2	301.2	165.3	+	82. Cypermethrin	15.6	433.1	191.0	416.0	+
35. Boscalid	6.7	342.9	307.5	140.1	+	83. (E)-Fenpyroximate	15.6	422.2	366.1	138.1	+
36. Paclobutrazol	6.9	294.3	70.1	125.1	+	84. Deltamethrin	15.9	523.1	280.8	505.9	+
37. Malathion	6.9	331.0	127.2	285.2	+	85. Fenvalerate	16.1	436.9	167.0	167.0	+
38. Dimethomorph II	7.1	388.2	301.2	165.3	+	86. Pyridaben	16.2	365.1	147.2	309.2	+
39. Myclobutanil	7.2	289.1	70.1	125.1	+	87. Resmethrin	16.4	339.3	171.1	128.1	+
40. Bifenazate	7.4	301.0	198.1	170.2	+	88. Permethrin trans	16.5	408.3	183.2	355.1	+
41. Fluopyram	7.5	397.1	173.2	208.3	+	89. Methoprene	16.7	311.3	191.3	279.1	+
42. Cyprodinil	7.7	226.2	93.1	108.2	+	90. Phenothrin (trans)	16.7	351.3	249.2	182.9	+
43. Spirotetramat	8.0	374.2	216.1	302.1	+	91. Permethrin-cis	16.9	408.3	183.2	355.1	+
44. Ethoprophos	8.2	243.1	131.1	97.1	+	92. Abamectin	16.9	890.5	305.4	567.4	+
45. Iprodione	8.4	330.1	245.0	247.0	+	93. d-Phenothrin (cis)	16.9	351.3	249.2	182.9	+
46. Iprodione (qualifier)	8.4	332.2	247.0	247.0	+	94. Etofenprox	17.0	394.3	177.2	359.3	+
47. Fipronil	8.5	436.8	331.8	251.9	-	95. Bifenthrin	17.1	440.0	181.2	166.2	+
48. Fenoxycarb	8.8	302.1	88.1	116.1	+	96. Acequinocyl	18.2	402.3	343.2	189.0	+

Chromatogram corresponding to a standard prepared in acetonitrile at 100 ng/mL.

**Column** Raptor ARC-18 (cat.# 9314A62)  
**Dimensions:** 150 mm x 2.1 mm ID  
**Particle Size:** 2.7 µm  
**Pore Size:** 90 Å  
**Guard Column:** Raptor ARC-18 EXP guard column cartridge 5 mm, 2.1 mm ID, 2.7 µm (cat.# 9314A0252)  
**Temp.:** 40 °C  
**Standard/Sample** Canadian pesticide standard #1 (cat.# 32593)  
 Canadian pesticide standard #2 (cat.# 32594)  
 Canadian pesticide standard #3 (cat.# 32595)  
 Canadian pesticide standard #4 (cat.# 32596)  
 Canadian pesticide standard #5 (cat.# 32597)  
 Canadian pesticide standard #6 (cat.# 32598)  
 Azadirachtin (cat.# 32599)  
 Dichlorvos (DDVP) (cat.# 32585)  
**Diluent:** Acetonitrile  
**Conc.:** 100 ng/mL  
**Inj. Vol.:** 1 µL  
**Mobile Phase**  
**A:** Water, 2 mM ammonium formate, 0.1% formic acid  
**B:** Methanol, 2 mM ammonium formate, 0.1% formic acid

Time (min)	Flow (mL/min)	%A	%B
0.00	0.4	95	5
1.0	0.4	50	50
2.5	0.4	50	50
4.0	0.4	35	65
7.0	0.4	35	65
7.5	0.4	30	70
9.0	0.4	30	70
9.5	0.4	25	75
11.0	0.4	25	75
11.5	0.4	20	80
13.5	0.4	20	80
15.5	0.4	5	95
16.5	0.4	0	100
19.5	0.4	0	100
19.6	0.4	95	5

**Detector** MS/MS  
**Ion Source:** Electrospray  
**Ion Mode:** ESI+/ESI-  
**Mode:** MRM  
**Instrument** Shimadzu 8045  
**Sample Preparation** Standards were aliquoted into 2 mL, screw-thread vials (cat.# 21143) and capped with short-cap, screw-vial closures (cat.# 24498).  
**Notes** Autosampler temperature: 10 °C  
 Canadian pesticide standards are also available as a kit: Canadian pesticide kit (cat.# 32592)

Want even better performance when analyzing metal-sensitive compounds? Check out Inert LC columns at [www.restek.com/inert](http://www.restek.com/inert).