

Organophosphorus Pesticides Analysis

Rtx®-OPPesticides/Rtx®-OPPesticides2

(proprietary Crossbond® phases)

- Application-specific columns for organophosphorus pesticides; best column combination for US EPA Method 8141A.
- Low bleed—ideal for GC/FPD, GC/NPD, or GC/MS analyses.
- Stable to 330 °C.



Using sophisticated computer modeling software, we created two stationary phases for separating the 53 organophosphorus pesticides (OPP) listed in EPA Method 8141A. Separation is improved, and analysis time is significantly reduced, compared to other columns. The extended upper temperature limit of these phases (330 °C) allows analysts to bake out high molecular weight contamination typically associated with pesticide samples. The low bleed columns are a perfect match for sensitive detection systems.

Rtx®-OPPesticides Columns (fused silica)

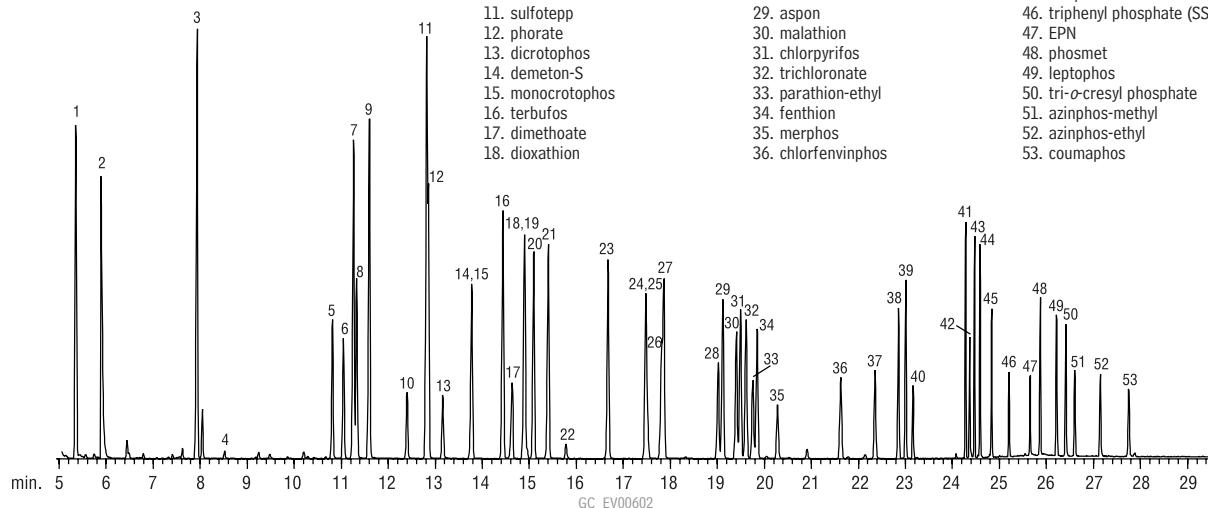
ID	df	temp. limits	30-Meter
0.32mm	0.50µm	-20 to 310/330°C	11239
0.53mm	0.83µm	-20 to 310/330°C	11240

Rtx®-OPPesticides2 Columns (fused silica)

ID	df	temp. limits	20-Meter	30-Meter
0.18mm	0.20µm	-20 to 310/330°C	11244	\$460
0.25mm	0.25µm	-20 to 310/330°C		11243
0.32mm	0.32µm	-20 to 310/330°C		11241
0.53mm	0.50µm	-20 to 310/330°C		11242

Organophosphorus pesticides by US EPA Method 8141A on an Rtx®-OPPesticides2 column.

Best column choice to resolve Method 8141A compounds!



1. dichlorvos
2. hexamethylphosphoramide
3. mevinphos
4. trichlorfon
5. TEPP
6. demeton-O
7. thionazin
8. tributyl phosphate (IS)
9. ethoprop
10. naled
11. sulfotep
12. phorate
13. dicrotophos
14. demeton-S
15. monocrotophos
16. terbufos
17. dimethoate
18. diaxathion
19. fonophos
20. diazinon
21. disulfoton
22. phosphamidon isomer
23. dichlorofenthion
24. chlorpyrifos methyl
25. phosphamidon
26. parathion-methyl
27. ronnel
28. fenitrothion
29. aspon
30. malathion
31. chlorpyrifos
32. trichloronate
33. parathion-ethyl
34. fenthion
35. merphos
36. chlorfenvinphos
37. crotoxyphos
38. stirofos
39. tokuthion
40. merphos oxone (breakdown product)
41. ethion
42. fensulfothion
43. bolstar
44. carbophenothion
45. famphur
46. triphenyl phosphate (SS)
47. EPN
48. phosmet
49. leptophos
50. tri-*o*-cresyl phosphate
51. azinphos-methyl
52. azinphos-ethyl
53. coumaphos

Column: Rtx®-OPPesticides2, 30m, 0.25mm ID, 0.25µm (cat.# 11243)
Sample: US EPA Method 8141A Custom Standard Mix 1µL 100ppm (100ng on column)

Triphenylphosphate Standard (cat.# 32281)

Tributylphosphate Standard (cat.# 32280)

8140/8141 OP Pesticides Calibration Mix A (cat.# 32277)

8141 OP Pesticides Calibration Mix B (cat.# 32278)

Custom Mixes: Call Restek for Information

1.0µL splitless (hold 0.4 min.), 4mm double

gooseneck inlet liner (cat.# 20785)

Inj. temp.: 250°C
Carrier gas: helium, constant flow
Flow rate: 1.0mL/min.

Oven temp.: 80°C (hold 0.5 min.) to 140°C @ 20°C/min.
to 210°C @ 4°C/min. (hold 1 min.) to

280°C @ 30°C (hold 5 min.)

Det:

Transfer line temp.: 280°C

Scan range: 35-400amu

Ionization:

EI



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