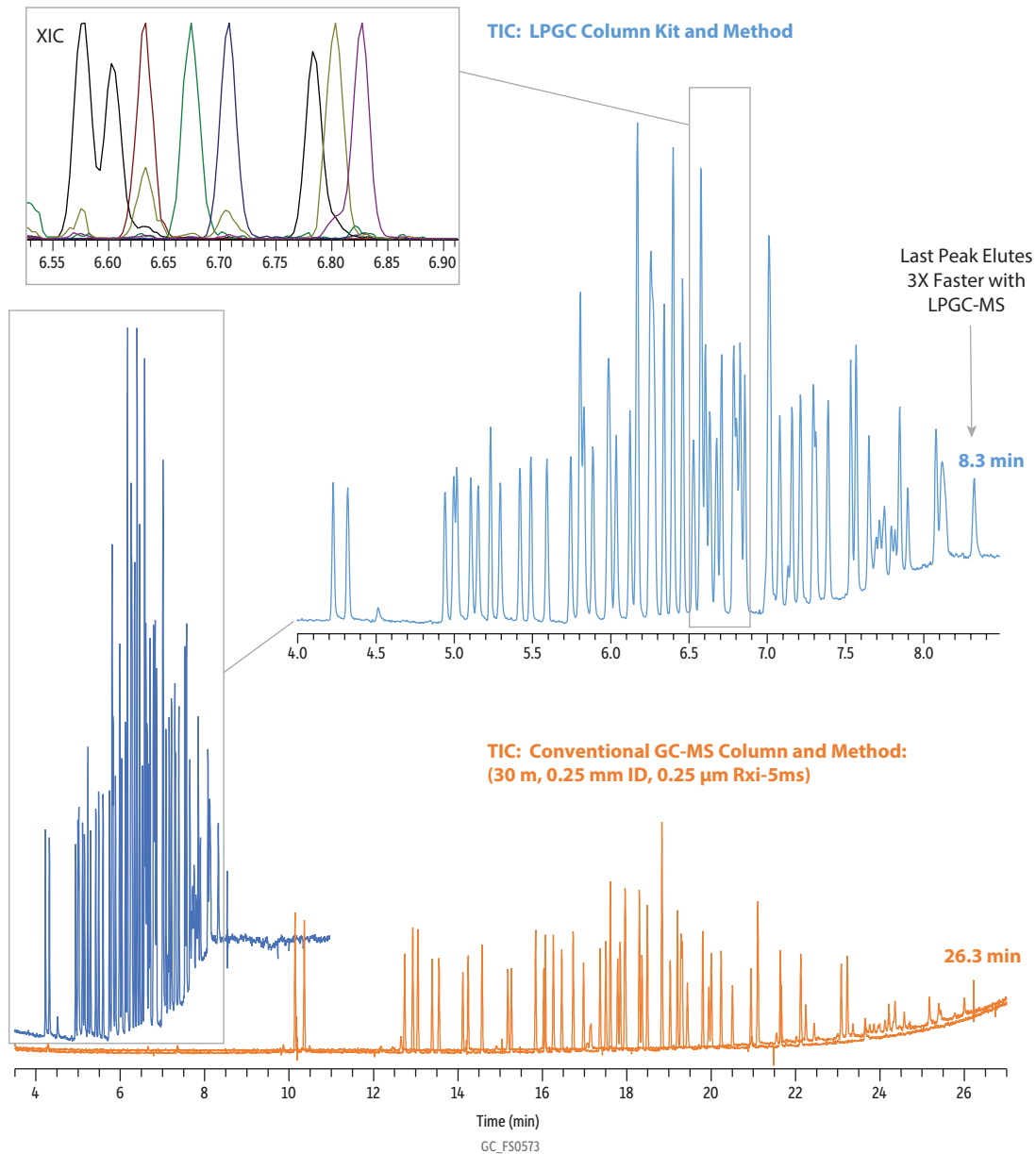


Comparison of Conventional vs. LPGC-MS Pesticides Analysis



Column Sample

GC multiresidue pesticide standard #2 (cat.# 32564)
GC multiresidue pesticide standard #6 (cat.# 32568)

Diluent:
Conc.:
Acetonitrile
2 µg/mL

Injection

Inj. Vol.: 2 µL split (split ratio 10:1)
Liner: Topaz 4.0 mm ID straight inlet liner w/ wool (cat.# 23444)
Inj. Temp.: 250 °C

Oven

Carrier Gas

He

Detector

TSQ 8000

SIM Program: 35-550 m/z

Transfer Line Temp.: 290 °C

Analyzer Type: Quadrupole

Source Temp.: 330 °C

Tune Type: PFTBA

Ionization Mode: EI

Instrument Notes

Thermo Scientific TSQ 8000 Triple Quadrupole GC-MS
The reference standard is also available as part of Restek's 200+ compound GC multiresidue pesticide kit (cat.# 32562).

Conventional (30 m) Analysis:

Column: Rxi-5ms, 30 m, 0.25 mm ID, 0.25 µm (cat.# 13423)
Temp. program: 90 °C (hold 1 min) to 330 °C at 8.5 °C/min (hold 5 min)
Flow: 1.4 mL/min

LPGC-MS Analysis:

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)
Temp. program: 80 °C (hold 1 min) to 320 °C at 35 °C/min (hold 5 min)
Flow: 2 mL/min

Comparison of Conventional vs. LPGC-MS Pesticides Analysis

Peaks	Conc. (µg/mL)	tr (30 m)	tr (LPGC)	Peaks	Conc. (µg/mL)	tr (30 m)	tr (LPGC)
1. Chloroneb	0.4	10.337	4.225	33. Endosulfan II	0.4	19.303	6.528
2. Pentachlorobenzene	0.4	10.562	4.320	34. 4,4'-DDD	0.4	19.480	6.575
3. α-BHC	0.4	12.956	4.939	35. 2,4'-DDT	0.4	19.562	6.603
4. Hexachlorobenzene	0.4	13.154	4.997	36. cis-Nonachlor	0.4	19.592	6.633
5. Pentachloroanisole	0.4	13.273	5.017	37. Endrin aldehyde	0.4	19.715	6.674
6. β-BHC	0.4	13.610	5.106	38. 4,4'-Methoxychlor olefin	0.4	20.079	6.708
7. δ-BHC	0.4	13.773	5.154	39. Endosulfan sulfate	0.4	20.225	6.803
8. γ-BHC	0.4	14.341	5.293	40. 4,4'-DDT	0.4	20.290	6.783
9. Tefluthrin	0.4	14.466	5.232	41. 2,4'-Methoxychlor	0.4	20.521	6.827
10. Endosulfan ether	0.4	14.803	5.419	42. Resmethrin	0.4	20.793	5.980
11. Transfluthrin	0.4	15.415	5.490	43. Endrin ketone	0.4	21.235	7.082
12. Heptachlor	0.4	15.504	5.592	44. Tetramethrin 1	0.4	21.245	6.990
13. Pentachlorothioanisole	0.4	16.086	5.745	45. Tetramethrin 2	0.4	21.388	7.018
14. Anthraquinone	0.4	16.279	5.803	46. Bifenthrin	0.4	21.402	7.011
15. Aldrin	0.4	16.317	5.803	47. Phenothrin 1	0.4	21.841	7.130
16. 4,4'-Dichlorobenzophenone	0.4	16.511	5.827	48. Tetradifon	0.4	21.939	7.211
17. Fenon	0.4	16.708	5.885	49. Phenothrin 2	0.4	21.956	7.157
18. Isodrin	0.4	16.987	5.980	50. Mirex	0.4	22.436	7.388
19. Heptachlor epoxide	0.4	17.235	6.035	51. lambda-Cyhalothrin	0.4	22.545	7.293
20. Bioallethrin	0.4	17.405	5.994	52. Acrinathrin	0.4	22.742	7.310
21. Chlorbenside	0.4	17.626	6.123	53. cis-Permethrin	0.4	23.388	7.535
22. trans-Chlordane	0.4	17.766	6.167	54. trans-Permethrin	0.4	23.534	7.565
23. 2,4'-DDE	0.4	17.871	6.171	55. Cyfluthrins	0.4	24.065-24.310	7.698-7.745
24. Endosulfan I	0.4	18.052	6.249	56. Cypermethrins	0.4	24.436-24.677	7.793-7.847
25. cis-Chlordane	0.4	18.109	6.256	57. Flucythrinate 1	0.4	24.677	7.844
26. trans-Nonachlor	0.4	18.218	6.279	58. Flucythrinate 2	0.4	24.898	7.899
27. Chlorfenson	0.4	18.232	6.226	59. Fenvalerate 1	0.4	25.500	8.079
28. 4,4'-DDE	0.4	18.569	6.337	60. tau-Fluvalinate 1	0.4	25.715	8.113
29. Dieldrin	0.4	18.630	6.395	61. Fenvalerate 2	0.4	25.732	8.140
30. 2,4'-DDD	0.4	18.756	6.395	62. tau-Fluvalinate 2	0.4	25.773	8.113
31. Ethylan	0.4	19.106	6.460	63. Deltamethrin	0.4	26.337	8.324
32. Endrin	0.4	19.116	6.550				