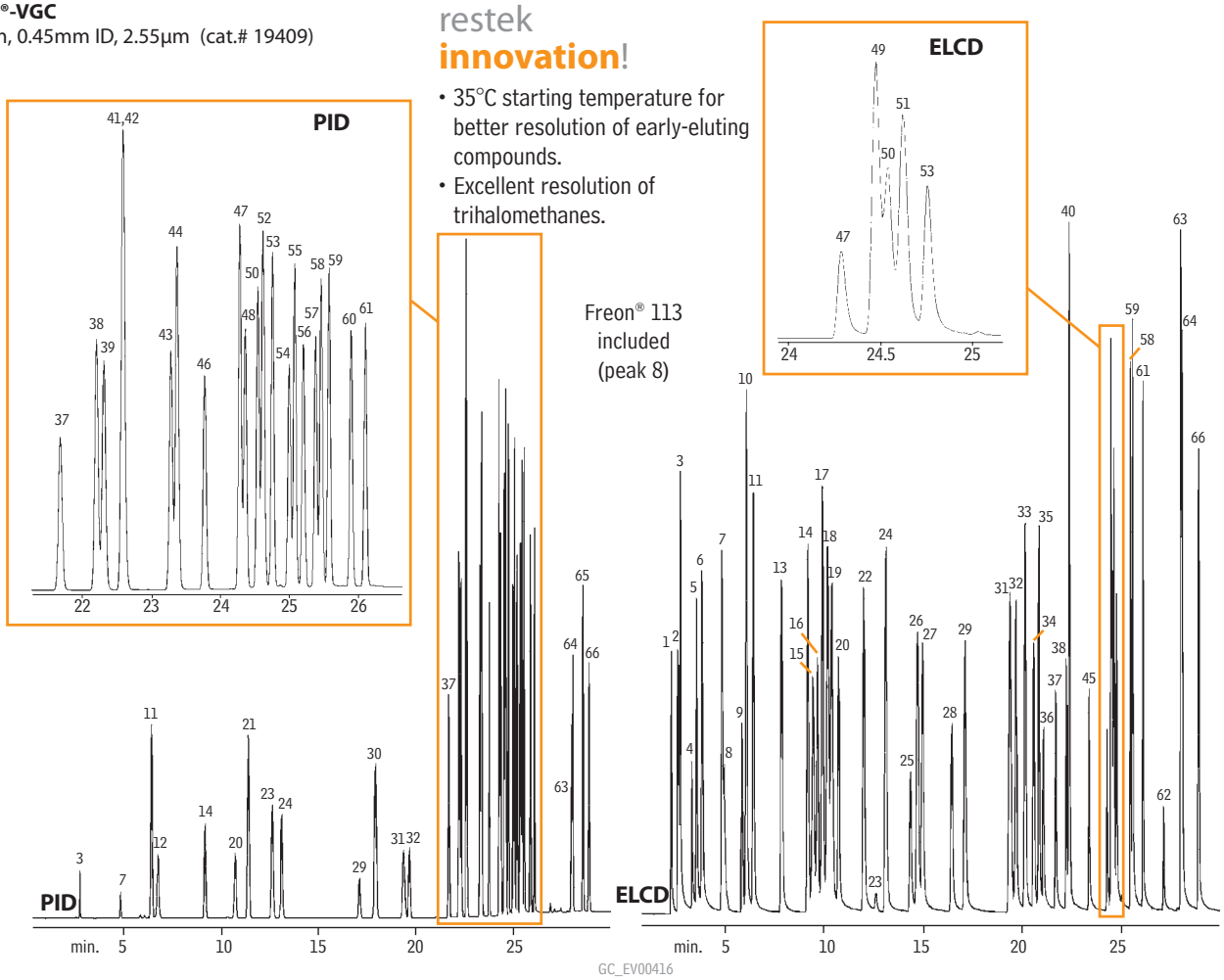
Volatile Organics
US EPA Method 502/8021
Rtx®-VGC

Primary column, dual-column analysis. Polymer specially designed for volatiles analysis by PID/ELCD. Confirmation analysis shown on page 566.

Rtx®-VGC
75m, 0.45mm ID, 2.55µm (cat.# 19409)

restek
innovation!

- 35°C starting temperature for better resolution of early-eluting compounds.
- Excellent resolution of trihalomethanes.



Primary column:	Rtx®-VGC, 75m, 0.45mm ID, 2.55µm (cat.# 19409)
Confirmation column:	Rtx®-VRX, 75m, 0.45mm ID, 2.55µm (cat.# 19309)
Conc.	20ppb in 5mL of RO water.
Concentrator:	Tekmar LSC-3000 Purge and Trap
Trap:	Vocarb 3000
Purge:	11 min. @ 40mL/min.
Dry purge:	1 min. @ 40mL/min. (MCS by-passed with Silcosteel® tubing, cat.# 21035)
Desorb preheat:	245°C
Desorb:	250°C for 2 min.
Bake:	260°C for 8 min.
Interface:	direct
Transfer line:	0.32mm ID Siltek® tubing

GC:	Finnigan 9001
Oven temp.:	35°C (hold 4 min.) to 75°C @ 3°C/min. (hold 2 min.) to 175°C @ 21°C/min. to 205°C @ 35°C/min. (hold 5 min.)
Carrier gas:	helium 11mL/min., constant pressure Adjust dichlorodifluoromethane to a retention time of 2.28 min. @ 35°C on the Rtx®-VGC column.
Detectors:	µGold Tandem PID/HALL® 2000 PID: makeup 7mL/min., purge 7mL/min., set @ 0.35mV, base temp. 200°C. ELCD HALL® 2000: RxnGas 25mL/min., RxnTemp. 940°C, propanol flow 470µL/min.

1. dichlorodifluoromethane
2. chloromethane
3. vinyl chloride
4. bromomethane
5. chloroethane
6. trichlorofluoromethane
7. 1,1-dichloroethene
8. Freon® 113
9. allyl chloride
10. methylene chloride
11. *trans*-1,2-dichloroethene
12. methyl *tert*-butyl ether
13. 1,1-dichloroethane
14. *cis*-1,2-dichloroethene
15. 2,2-dichloropropane
16. bromochloromethane
17. chloroform
18. carbon tetrachloride
19. 1,1,1-trichloroethane
20. 1,1-dichloropropene
21. benzene
22. 1,2-dichloroethane
23. fluorobenzene (SS)
24. trichloroethene
25. dibromomethane
26. 1,2-dichloropropane
27. bromodichloromethane
28. 1-bromo-2-chloroethane (SS)
29. *cis*-1,3-dichloropropene
30. toluene
31. tetrachloroethene
32. *trans*-1,3-dichloropropene
33. 1,1,2-trichloroethane
34. dibromochloromethane
35. 1,3-dichloropropane
36. 1,2-dibromoethane
37. 1-chloro-3-fluorobenzene (SS)
38. chlorobenzene
39. ethylbenzene
40. 1,1,1,2-tetrachloroethane
41. *m*-xylene
42. *p*-xylene
43. *o*-xylene
44. styrene
45. bromoform
46. isopropylbenzene
47. bromobenzene
48. *n*-propylbenzene
49. 1,1,2,2-tetrachloroethane
50. 2-chlorotoluene
51. 1,2,3-trichloropropane
52. 1,3,5-trimethylbenzene
53. 4-chlorotoluene
54. *tert*-butylbenzene
55. 1,2,4-trimethylbenzene
56. *sec*-butylbenzene
57. *p*-isopropyltoluene
58. 1,3-dichlorobenzene
59. 1,4-dichlorobenzene
60. *n*-butylbenzene
61. 1,2-dichlorobenzene
62. 1,2-dibromo-3-chloropropane
63. hexachlorobutadiene
64. 1,2,4-trichlorobenzene
65. naphthalene
66. 1,2,3-trichlorobenzene

Acknowledgement: Finnigan 9001 GC, µGold Tandem Photoionization/HALL® 2000 Electrolytic Conductivity Detector provided courtesy of Thermo Scientific GC & GC/MS Division, 2215 Grand Avenue Pkwy, Austin, Texas 78728