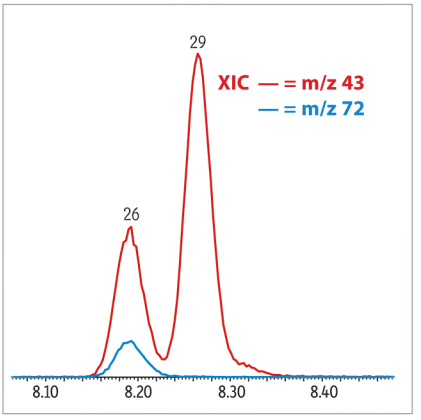
Volatiles by EPA Method 8260 on Rxi®-624Sil MS (30 m, 0.25 mm ID, 1.40 µm)

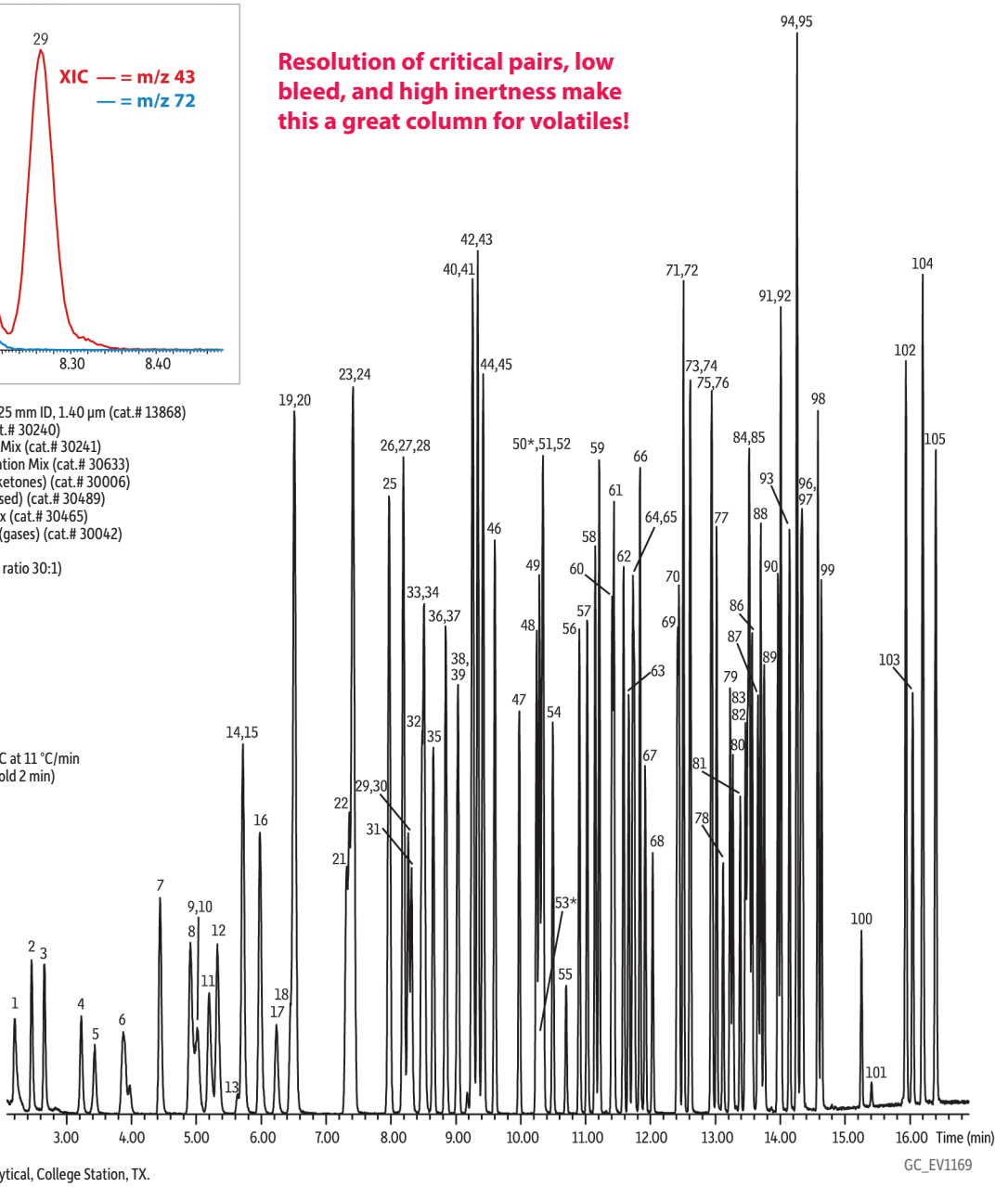


Resolution of critical pairs, low bleed, and high inertness make this a great column for volatiles!

Column Rxi®-624Sil MS, 30 m, 0.25 mm ID, 1.40 µm (cat.# 13868)
Sample 8260A Surrogate Mix (cat.# 30240)
8260A Internal Standard Mix (cat.# 30241)
8260B MegaMix® Calibration Mix (cat.# 30633)
VOA Calibration Mix #1 (ketones) (cat.# 30006)
8260B Acetate Mix (Revised) (cat.# 30489)
California Oxygenates Mix (cat.# 30465)
502.2 Calibration Mix #1 (gases) (cat.# 30042)
Conc.: 25 ppb in RO water
Injection purge and trap split (split ratio 30:1)
Inj. Temp.: 225 °C
Purge and Trap
Instrument: OI Analytical 4660
Trap Type: 10 Trap
Purge: 11 min @ 20 °C
Desorb Preheat Temp.: 180 °C
Desorb: 0.5 min @ 190 °C
Bake: 5 min @ 210 °C
Interface Connection: injection port
Oven
Oven Temp: 35 °C (hold 5 min) to 60 °C at 11 °C/min to 220 °C at 20 °C/min (hold 2 min)
Carrier Gas He, constant flow
Flow Rate: 1.0 mL/min
Detector MS
Mode: Scan
Transfer Line Temp.: 230 °C
Analyzer Type: Quadrupole
Source Temp.: 230 °C
Quad Temp.: 150 °C
Electron Energy: 70 eV
Solvent Delay Time: 1.5 min
Tune Type: BFB
Ionization Mode: EI
Scan Range: 36-260 amu
Instrument Agilent 7890A GC & 5975C MSD

Notes
Other Purge and Trap Conditions:
Sample Inlet: 40°C
Sample: 40°C
Water Management: Purge 110°C, Desorb 0°C, Bake, 240°C

Acknowledgement
Eclipse 4660 purge and trap courtesy of O.I. Analytical, College Station, TX.



GC_EV1169

Peaks	T_R (min.)
1. Dichlorodifluoromethane (CFC-12)	2.198
2. Chloromethane	2.459
3. Vinyl chloride	2.659
4. Bromomethane	3.226
5. Chloroethane	3.434
6. Trichlorofluoromethane (CFC-11)	3.876
7. Diethyl ether (ethyl ether)	4.440
8. 1,1-Dichloroethene	4.909
9. 1,1,2-Trichlorotrifluoroethane (CFC-113)	4.998
10. Acetone	5.029
11. Iodomethane	5.195
12. Carbon disulfide	5.323
13. Acetonitrile	5.637
14. Allyl chloride	5.715
15. Methyl acetate	5.723
16. Methylene chloride	5.981
17. *tert*-Butyl alcohol	6.234
18. Acrylonitrile	6.451
19. Methyl *tert*-butyl ether (MTBE)	6.509
20. *trans*-1,2-Dichloroethene	6.512
21. 1,1-Dichloroethane	7.315
22. Vinyl acetate	7.359
23. Diisopropyl ether (DIPE)	7.407
24. Chloroprene	7.429
25. Ethyl *tert*-butyl ether (ETBE)	7.970
26. 2-Butanone (MEK)	8.193
27. *cis*-1,2-Dichloroethene	8.193
28. 2,2-Dichloropropane	8.193
29. Ethyl acetate	8.265
30. Propionitrile	8.276
31. Methyl acrylate	8.318
32. Methacrylonitrile	8.476
33. Bromochloromethane	8.507
34. Tetrahydrofuran	8.521
35. Chloroform	8.651
36. 1,1,1-Trichloroethane	8.843
37. Dibromofluoromethane	8.848
38. Carbon tetrachloride	9.026
39. 1,1-Dichloropropene	9.037
40. 1,2-Dichloroethane-d4	9.246
41. Benzene	9.262
42. 1,2-Dichloroethane	9.334
43. Isopropyl acetate	9.340
44. Isobutyl alcohol	9.421
45. *tert*-Amyl methyl ether (TAME)	9.421
46. Fluorobenzene	9.598
47. Trichloroethene	9.976
48. 1,2-Dichloropropane	10.243
49. Methyl methacrylate	10.290
50. 1,4-Dioxane (ND)	10.299*
51. Dibromomethane	10.326
52. Propyl acetate	10.346
53. 2-Chloroethanol (ND)	10.368*
54. Bromodichloromethane	10.496
55. 2-Nitropropane	10.698
56. *cis*-1,3-Dichloropropene	10.904
57. 4-Methyl-2-pentanone (MIBK)	11.026
58. Toluene-D8	11.148
59. Toluene	11.210
60. *trans*-1,3-Dichloropropene	11.407
61. Ethyl methacrylate	11.435
62. 1,1,2-Trichloroethane	11.585
63. Tetrachloroethene	11.662
64. 1,3-Dichloropropane	11.729
65. 2-Hexanone	11.749
66. Butyl acetate	11.837
67. Dibromochloromethane	11.921
68. 1,2-Dibromoethane (EDB)	12.035
69. Chlorobenzene-d5	12.412
70. Chlorobenzene	12.440
71. Ethylbenzene	12.507
72. 1,1,1,2-Tetrachloroethane	12.507
73. *m*-Xylene	12.612
74. *p*-Xylene	12.612
75. *o*-Xylene	12.935
76. Styrene	12.949
77. *n*-Amyl acetate	13.018
78. Bromoform	13.118
79. Isopropylbenzene (cumene)	13.226
80. *cis*-1,4-Dichloro-2-butene	13.268
81. 4-Bromofluorobenzene	13.385
82. 1,1,2,2-Tetrachloroethane	13.456
83. *trans*-1,4-Dichloro-2-butene	13.496
84. Bromobenzene	13.515
85. 1,2,3-Trichloropropane	13.526
86. *n*-Propylbenzene	13.565
87. 2-Chlorotoluene	13.657
88. 1,3,5-Trimethylbenzene	13.699
89. 4-Chlorotoluene	13.751
90. *tert*-Butylbenzene	13.965
91. Pentachloroethane	14.007
92. 1,2,4-Trimethylbenzene	14.010
93. *sec*-Butylbenzene	14.140
94. 4-Isopropyltoluene (*p*-cymene)	14.254
95. 1,3-Dichlorobenzene	14.263
96. 1,4-Dichlorobenzene-D4	14.321
97. 1,4-Dichlorobenzene	14.340
98. *n*-Butylbenzene	14.579
99. 1,2-Dichlorobenzene	14.635
100. 1,2-Dibromo-3-chloropropane (DBCP)	15.252
101. Nitrobenzene	15.407
102. 1,2,4-Trichlorobenzene	15.935
103. Hexachloro-1,3-butadiene	16.040
104. Naphthalene	16.196
105. 1,2,3-Trichlorobenzene	16.396

* ND = not detected; retention time determined by wet needle injection

Restek Corporation 110 Benner Circle Bellefonte, PA 16823
1-814-353-1300 • 1-800-356-1688 • Fax: 1-814-353-1309 • www.restek.com