# Semivolatiles on Rtx-5 with 5 m Integra-Guard by EPA Method 8270

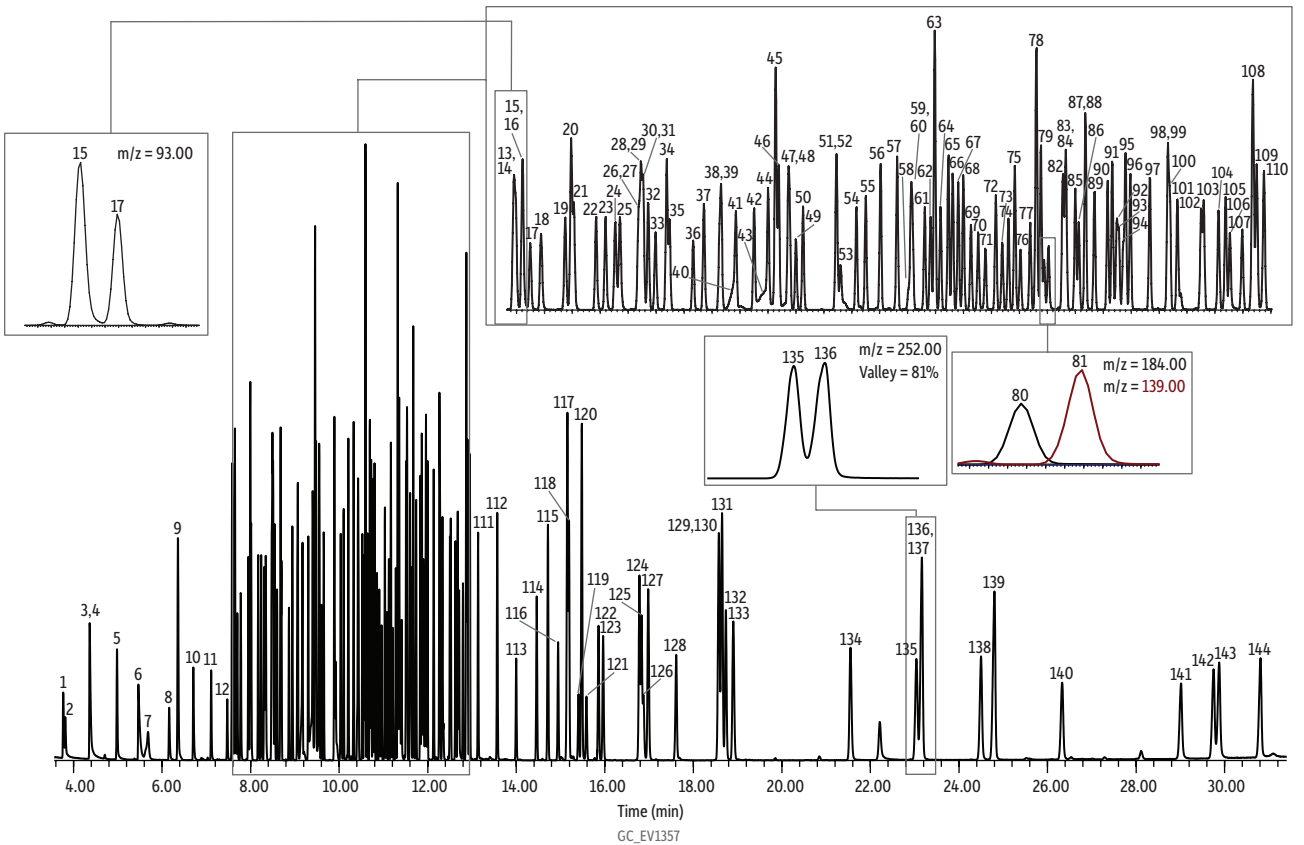
**Peaks**
1. 1,4-Dioxane-D8 (IS)
2. 1,4-Dioxane
3. Pyridine
4. N-Nitrosodimethylamine
5. Ethyl methacrylate
6. 2-Picoline
7. N-Nitrosomethylethylamine
8. Methyl methanesulfonate
9. 2-Fluorophenol (SS)
10. N-Nitrosodiethylamine
11. Ethyl methanesulfonate
12. Benzaldehyde
13. Phenol-D6 (SS)
14. Phenol
15. Aniline
16. Pentachloroethane
17. Bis(2-chloroethyl) ether
18. 2-Chlorophenol
19. 1,3-Dichlorobenzene
20. Dichlorobenzene-D4 (IS)
21. 1,4-Dichlorobenzene
22. Benzyl alcohol
23. 1,2-Dichlorobenzene
24. 2-Methylphenol
25. Bis(2-Chloroisopropyl)ether
26. 4-Methylphenol
27. 3-Methylphenol
28. Acetophenone
29. Nitrosopyrrolidine
30. N-Nitrosodipropylamine

**Peaks**
31. N-Nitrosomorpholine
32. *o*-Toluidine
33. Hexachloroethane
34. Nitrobenzene-D5 (SS)
35. Nitrobenzene
36. N-Nitrosopiperidine
37. Isophorone
38. 2-Nitrophenol
39. 2,4-Dimethylphenol
40. Benzoic acid
41. Bis(2-chloroethoxy)methane
42. 2,4-Dichlorophenol
43. Phenyl-*tert*-butylamine (Phentermine)
44. 1,2,4-Trichlorobenzene
45. Naphthalene-D8 (IS)
46. Naphthalene
47. 4-Chloroaniline
48. 2,6-Dichlorophenol
49. Hexachloropropene
50. Hexachlorobutadiene
51. Caprolactam
52. N-Nitroso-N-butylamine
53. 1,4-Phenylenediamine
54. 4-Chloro-3-methylphenol
55. Isosafrole I
56. 2-Methylnaphthalene
57. 1-Methylnaphthalene
58. Isosafrole II
59. 1,2,4,5-Tetrachlorobenzene

**Peaks**
60. Hexachlorocyclopentadiene
61. 2,4,6-Trichlorophenol
62. 2,4,5-Trichlorophenol
63. 2-Fluorobiphenyl (SS)
64. Safrole
65. Biphenyl
66. 2-Chloronaphthalene
67. 1-Chloronaphthalene
68. Diphenyl ether
69. 2-Nitroaniline
70. 1,4-Naphthoquinone
71. 1,2-Dinitrobenzene
72. Dimethyl phthalate
73. 1,3-Dinitrobenzene
74. 2,6-Dinitrotoluene
75. Acenaphthylene
76. 1,4-Dinitrobenzene
77. 3-Nitroaniline
78. Acenaphthene-D10 (IS)
79. Acenaphthene
80. 2,4-Dinitrophenol
81. 4-Nitrophenol
82. Dibenzofuran
83. 2,4-Dinitrotoluene
84. Pentachlorobenzene
85. 1-Naphthalamine
86. 2,3,5,6-Tetrachlorophenol
87. 2,3,4,6-Tetrachlorophenol
88. 2-Naphthalamine
89. Diethyl Phthalate

**Peaks**
90. 4-Chlorophenyl phenyl ether
91. Fluorene
92. 2-Methyl-5-nitroaniline
93. 4-Nitroaniline
94. 4,6-Dinitro-2-methylphenol
95. N-nitrosodiphenylamine (as diphenylamine)
96. N,N'-Diphenylhydrazine (as Azobenzene)
97. 2,4,6-Tribromophenol (SS)
98. 1,3,5-Trinitrobenzene
99. Diallate
100. Phenacetin
101. 4-Bromophenyl phenyl ether
102. Atrazine
103. Hexachlorobenzene
104. 4-Aminobiphenyl
105. Propyzamide
106. Pentachlorophenol
107. Pentachloronitrobenzene
108. Phenanthrene-D10 (IS)
109. Phenanthrene
110. Anthracene
111. Carbazole
112. di-*n*-Butyl phthalate
113. 4-Nitroquinoline 1-oxide
114. Isodrin
115. Fluoranthene
116. Benzidine
117. Pyrene-D10 (SS)

**Peaks**
118. Pyrene
119. Aramite I
120. *p*-Terphenyl-D14 (SS)
121. Aramite II
122. Dimethylaminoazobenzene
123. Chlorobenzilate
124. 3,3'-Dimethylbenzidine
125. Butyl benzyl phthalate
126. Kepone
127. Bis(2-ethylhexyl) adipate
128. 2-(Acetylamino)fluorene
129. Benz[a]anthracene
130. 3,3'-Dichlorobenzidine
131. Chrysene-D12 (IS)
132. Chrysene
133. Bis(2-ethylhexyl) phthalate
134. Di-*n*-octyl phthalate
135. Benzo[b]fluoranthene
136. Benzo[k]fluoranthene
137. 7,12-Dimethylbenzo[a]anthracene
138. Benzo[a]pyrene
139. Perylene-D12 (IS)
140. 3-Methylcholanthrene
141. Dibenz[a,j]acridine
142. Indeno[1,2,3-cd]pyrene
143. Dibenz[a,h]anthracene
144. Benzo[ghi]perylene




GC_EV1357

| | |
|---|---|
| **Column** | Rtx-5 w/ 5 m Integra-Guard, 30 m, 0.25 mm ID, 0.50 µm (cat.# 10238-124) |
| **Sample** | Revised SV internal standard mix (cat.# 31886)<br>Revised B/N surrogate mix (cat.# 31888)<br>Acid surrogate mix (4/89 SOW) (cat.# 31063)<br>8270 MegaMix (cat.# 31850)<br>8270 Benzidines mix (cat.# 31852)<br>Benzoic acid (cat.# 31879)<br>Appendix IX mix #1, revised (cat.# 32459)<br>Appendix IX mix #2 (cat.# 31806) |
| Diluent: | Dichloromethane |
| Conc.: | 10 ng/µL (IS and SS at 20 ng/µL) |
| **Injection** | |
| Inj. Vol.: | 1 µL pulsed splitless (hold 0.7 min) |
| Liner: | Premium 4 mm single taper w/wool (cat.# 23303) |

| | |
|---|---|
| Inj. Temp.: | 270 °C |
| Pulse Pressure: | 30 psi (206.8kPa) |
| Pulse Time: | 0.8 min |
| Purge Flow: | 100 mL/min |
| **Oven** | |
| Oven Temp.: | 40 °C (hold 2 min) to 90 °C at 12.5 °C/min to 246 °C at 25 °C/min to 295 °C at 3 °C/min to 325 °C at 6 °C/min (hold 3 min) |
| **Carrier Gas** | He, constant flow |
| Flow Rate: | 2.08 mL/min |
| **Detector** | MS |
| Mode: | Scan |

Scan Program:

| Group | Start Time (min) | Scan Range (amu) | Scan Rate (scans/sec) |
|---|---|---|---|
| 1 | 3.5 | 35-550 | 5.6 |

| | |
|---|---|
| Transfer Line Temp.: | 320 °C |
| Analyzer Type: | Quadrupole |
| Source Type: | Inert |
| Drawout Plate: | 9mm ID |
| Source Temp.: | 350 °C |
| Quad Temp.: | 180 °C |
| Electron Energy: | 69.9 eV |
| Solvent Delay Time: | 3.5 min |
| Ionization Mode: | EI |
| **Instrument** | Agilent 7890A GC & 5975C MSD |

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