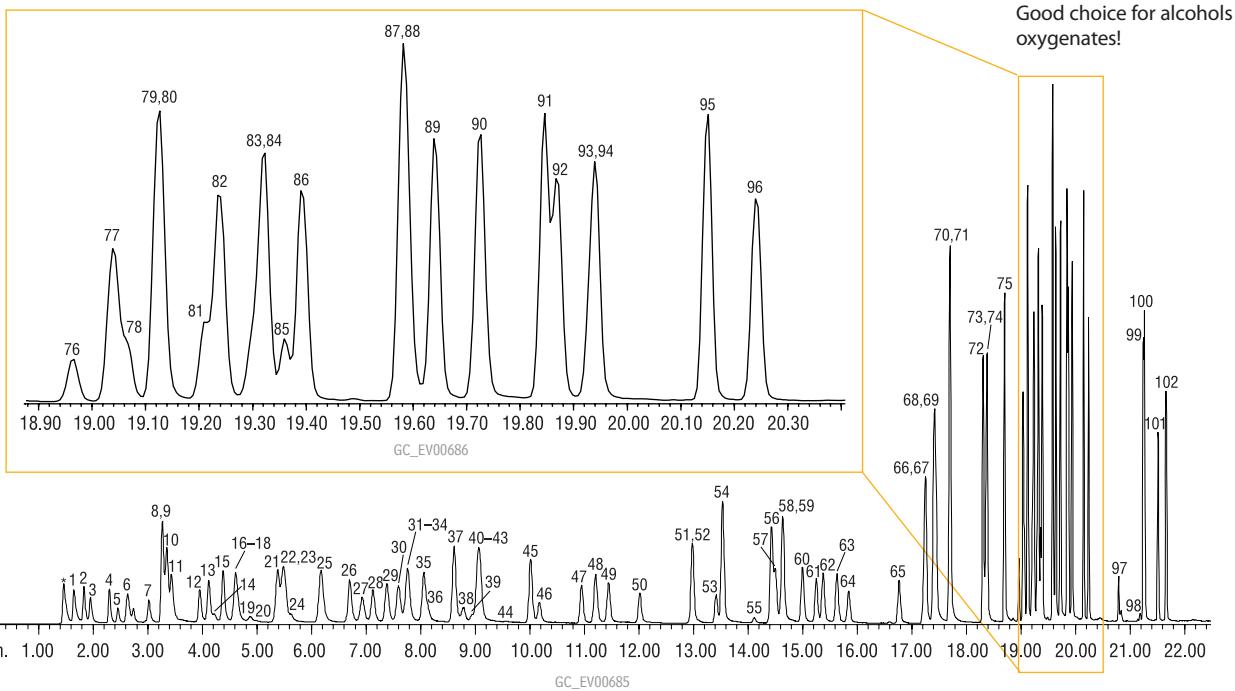
Volatile Organics
US EPA Method 8260 (80 ppb Standard)
Rtx®-VMS

restek
innovation!

Good choice for alcohols & oxygenates!



Column:	Rtx®-VMS, 30m, 0.25mm ID, 1.4µm (cat.# 19915)
Sample:	Calibration, internal standard, surrogate standard mixes (cat.# 30475B, 30465, 30006, 30240, 30074)

Purge and trap conditions:
O.I. Analytical 4560 with 4551A Autosampler

Trap:	#10 (Tenax®/silica gel/carbon molecular sieve)
Purge time:	11 min.
Purge flow rate:	38mL/min.
Desorb flow rate:	32mL/min.
Desorb time:	1.0 min.
Bake time:	10 min.
Sample size:	10mL
Water management:	110°C purge, 0°C desorb, 240°C bake
Split ratio:	1:25
Temperatures:	
Sample:	40°C
Trap:	20°C purge, 190°C desorb, 210°C bake
6-Port valve:	110°C
Transfer line:	110°C
Sparge mount:	45°C
Desorb preheat:	150°C
Valve manifold:	50°C
Other conditions:	pre-purge, pre-heat, dry purge OFF

Chromatography:

Inj. temp.:	250°C
Carrier gas:	helium, constant flow
Flow rate:	1.3 mL/min.
Dead time:	1.47 min. @ 35°C
Oven temp.:	35°C (hold 7 min.) to 90°C @ 4°C/min.(no hold) to 220°C @ 45°C/min. (hold 1 min.).
Det.:	Agilent 5971A GC/MS
Transfer line temp.:	280°C
Scan range:	35-260amu
Tune:	PFTBA/BFB

*carbon dioxide
1. dichlorodifluoromethane
2. chloromethane
3. vinyl chloride
4. bromomethane
5. chloroethane
6. trichlorofluoromethane
7. diethylether
8. 1,1-dichloroethene
9. carbon disulfide
10. Freon® 113
11. iodomethane
12. allyl chloride
13. methylene chloride
14. acetone
15. *trans*-1,2-dichloroethene
16. methyl-d3-*tert*-butyl-ether
17. methyl acetate
18. methyl-*tert*-butyl-ether
19. *tert*-butyl alcohol
20. acetonitrile
21. diisopropyl ether
22. chloroprene
23. 1,1-dichloroethane
24. acrylonitrile
25. ethyl-*tert*-butyl ether
26. *cis*-1,2-dichloroethene
27. 2,2-dichloropropane
28. bromochloromethane
29. chloroform
30. carbon tetrachloride
31. tetrahydrofuran
32. methyl acrylate
33. 1,1,1-trichloroethane
34. dibromofluoromethane
35. 1,1-dichloropropene
36. 2-butanone
37. benzene
38. propionitrile
39. methacrylonitrile
40. 1,2-dichloroethane-d4
41. pentafluorobenzene
42. *tert*-amyl-methyl ether
43. 1,2-dichloroethane
44. isobutyl alcohol
45. trichloroethene
46. 1,4-difluorobenzene
47. dibromomethane
48. 1,2-dichloropropane
49. bromodichloromethane
50. methyl methacrylate
51. *cis*-1,3-dichloropropene
52. 2-chloroethyl vinyl ether
53. toluene-d8
54. toluene
55. 2-nitropropane
56. tetrachloroethene
57. 2-bromo-1-chloropropane
58. 4-methyl-2-pentanone
59. *trans*-1,3-dichloropropene
60. 1,1,2-trichloroethane
61. ethyl methacrylate
62. dibromochloromethane
63. 1,3-dichloropropane
64. 1,2-dibromoethane
65. 2-hexanone
66. chlorobenzene-d5
67. chlorobenzene
68. ethylbenzene
69. 1,1,1,2-tetrachloroethane
70. *m*-xylene
71. *p*-xylene
72. *o*-xylene
73. bromoform
74. stryrene
75. isopropylbenzene
76. 4-bromo-1-fluorobenzene (SS)
77. bromobenzene
78. *cis*-1,4-dichloro-2-butene
79. 1,4-dichlorobutane
80. *n*-propylbenzene
81. 1,1,2,2-tetrachloroethane
82. 2-chlorotoluene
83. 1,2,3-trichloropropane
84. 1,3,5-trimethylbenzene
85. *trans*-1,4-dichloro-2-butene
86. 4-chlorotoluene
87. *tert*-butylbenzene
88. pentachloroethane
89. 1,2,4-trimethylbenzene
90. *sec*-butylbenzene
91. *p*-isopropyltoluene
92. 1,3-dichlorobenzene
93. 1,4-dichlorobenzene-d4
94. 1,4-dichlorobenzene
95. *n*-butylbenzene
96. 1,2-dichlorobenzene
97. 1,2-dibromo-3-chloropropane
98. nitrobenzene
99. hexachlorobutadiene
100. 1,2,4-trichlorobenzene
101. naphthalene
102. 1,2,3-trichlorobenzene

Acknowledgments: Purge & trap courtesy of O.I. Analytical.

free literature

Analysis of Trace Oxygenates in Petroleum-Contaminated Wastewater, Using Purge-and-Trap/GC/MS (US EPA Methods 5030B & 8260)

This 8-page note describes a practical, effective approach to monitoring oxygenates in wastewater. We evaluated the Rtx®-VMS stationary phase for oxygenates recovery, adjusted purge and trap conditions to increase responses for oxygenates, and optimized GC conditions to eliminate coelutions of ion-sharing analytes. The result is a sensitive, accurate analysis for gasoline oxygenates in wastewater, in the presence of much higher total gasoline content.

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Applications Note
lit. cat.# 59856