Oxygenates
Rtx®-VGC

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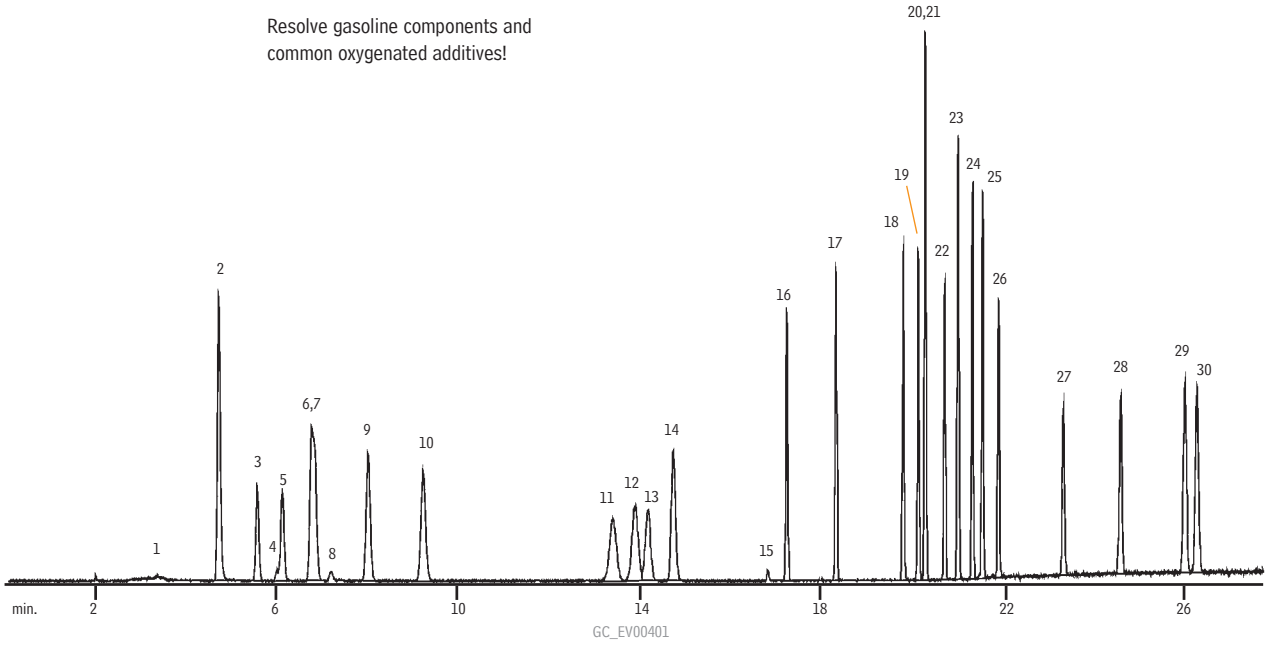
innovation!

Resolve gasoline components and common oxygenated additives!



Column:	Rtx®-VGC 30m, 0.25mm, 1.40µm (cat.# 19415)
Inj.:	10:1 split at injection port; 1mm ID liner
Conc.:	Compounds at 100ppb in 5mL of RO water (unless otherwise noted)
Oven program:	35°C (hold 14 min.) to 220°C @ 24°C/min. (hold 6 min.)
Carrier gas:	helium @ ~1mL/min. constant flow
Concentrator:	Tekmar LSC-3100 Purge and Trap
Trap:	Vocarb 3000
Purge:	11 min. @ 40mL/min. @ ambient temperature
Dry purge:	1 min. @ 40mL/min. (MCS bypassed using Silcosteel® tubing)
Desorb preheat:	245°C
Desorb:	250°C for 2 min., Flow 10mL/min.
Bake:	260°C for 8 min.
Interface:	transfer line 0.32mm ID Siltek® fused silica
Detector:	Agilent 5973 MS
Scan range:	25-300amu

1. methanol (100,000ppb)
2. ethanol (10,000ppb)
3. 2-methylpentane
4. 2-propanol (500ppb)
5. 3-methylpentane
6. hexane
7. methyl *tert*-butyl ether
8. *tert*-butanol (500ppb)
9. diisopropyl ether
10. ethyl-*tert*-butyl ether
11. isooctane
12. benzene
13. *n*-heptane
14. *tert*-amyl methyl ether
15. 1-butanol (500ppb)
16. α,α,α-trifluorotoluene
17. toluene
18. 1-chloro-3-fluorobenzene
19. ethylbenzene
20. *m*-xylene
21. *p*-xylene
22. *o*-xylene
23. isopropylbenzene
24. decane
25. 1,3,5-trimethylbenzene
26. 1,2,4-trimethylbenzene
27. 4-bromochlorobenzene
28. naphthalene
29. 2-methylnaphthalene (150ppb)
30. 1-methylnaphthalene (150ppb)

free literature

Resolving Oxygenates from Gasoline Additives, Using an Rtx®-VGC GC Column

Avoid coelution of compounds that share quantification ions

Successful analysis of oxygenates in environmental samples depend on the ability of the analytical column to resolve the oxygenates from early-eluting alkanes, alkenes, and alkynes. Nonpolar columns are used for this application, but they are incompatible with polar compounds, and thus can give broad peaks and reduced sample capacity for the alcohols. The unique polarity of Rtx®-VGC columns makes them ideal for oxygenates analysis. Example chromatograms with both PID and MS detection are shown in this 4-page note; purge and trap conditions also are discussed.

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Applications Note
lit. cat.# 59345