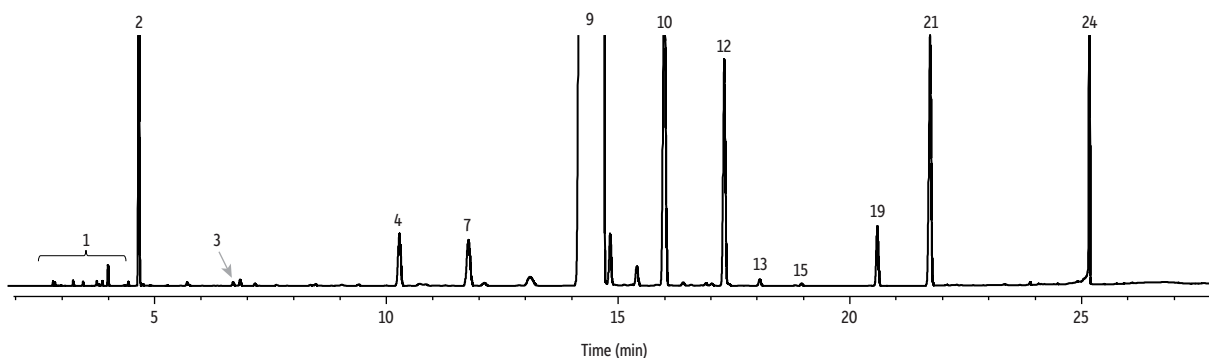
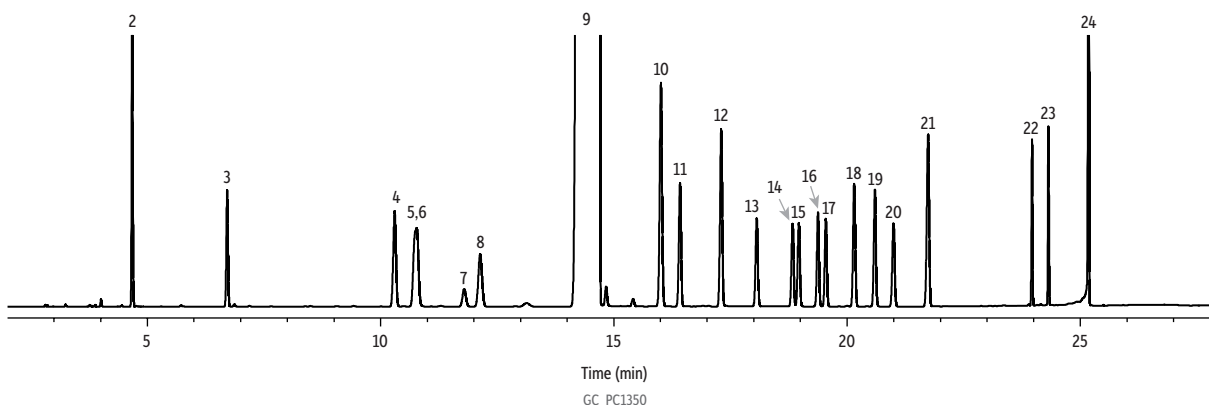


Cumene (Isopropylbenzene) on Rtx-1

Impurities in Cumene Sample



Synthetic Blend of Common Impurities Found in Cumene



Peaks	tr (min)	Peaks	tr (min)
1. Nonaromatic hydrocarbons	-	13. <i>tert</i> -Butylbenzene	18.07
2. Benzene	4.67	14. Isobutylbenzene	18.84
3. Toluene	6.71	15. <i>sec</i> -Butylbenzene	18.97
4. Ethylbenzene	10.31	16. <i>m</i> -Cymene	19.38
5. <i>m</i> -Xylene	10.78	17. <i>p</i> -Cymene	19.55
6. <i>p</i> -Xylene	10.78	18. <i>o</i> -Cymene	20.16
7. Styrene	11.79	19. Acetophenone	20.60
8. <i>o</i> -Xylene	12.14	20. <i>n</i> -Butylbenzene	21.00
9. Cumene	14.70	21. 2-Phenyl-2-propanol	21.74
10. <i>n</i> -Propylbenzene	16.02	22. 1,3-Diisopropylbenzene	23.96
11. Phenol	16.43	23. 1,4-Diisopropylbenzene	24.31
12. α -Methylstyrene	17.31	24. Cumene hydroperoxide	25.17

Column Rtx-1, 60 m, 0.32 mm ID, 1.00 μ m (cat.# 10157)
Sample Cumene
Injection
 Inj. Vol.: 1 μ L split (split ratio 60:1)
 Liner: Topaz 4.0 mm ID Precision inlet liner w/wool (cat.# 23305)
 Inj. Temp.: 250 °C
Oven
 Oven Temp.: 85 °C (hold 13 min) to 125 °C at 6 °C/min (hold 2 min) to 250 °C at 30 °C/min (hold 7 min)
Carrier Gas He, constant flow
 Flow Rate: 3 mL/min
Detector FID @ 300 °C
Instrument Agilent 7890B GC
Notes Top chromatogram: commercially available cumene
 Bottom chromatogram: synthetic blend of impurities known to be present in cumene at concentrations expected to be found in commercial samples.