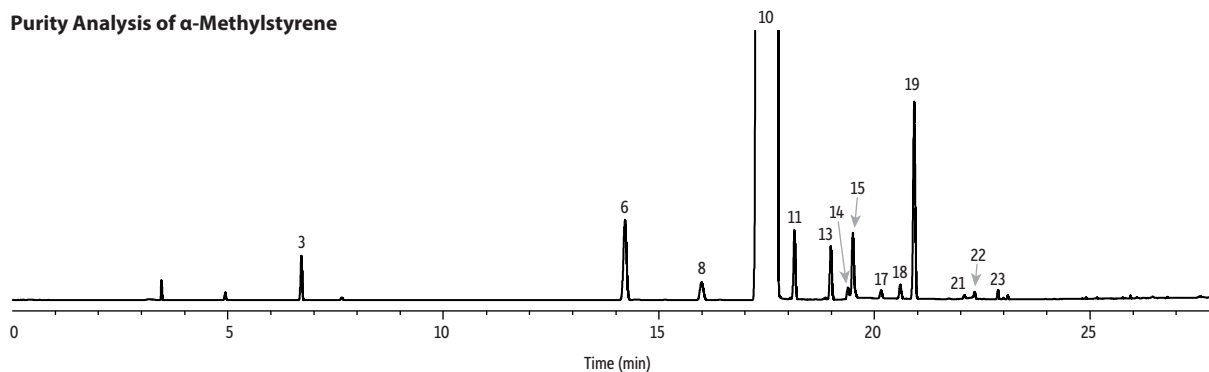
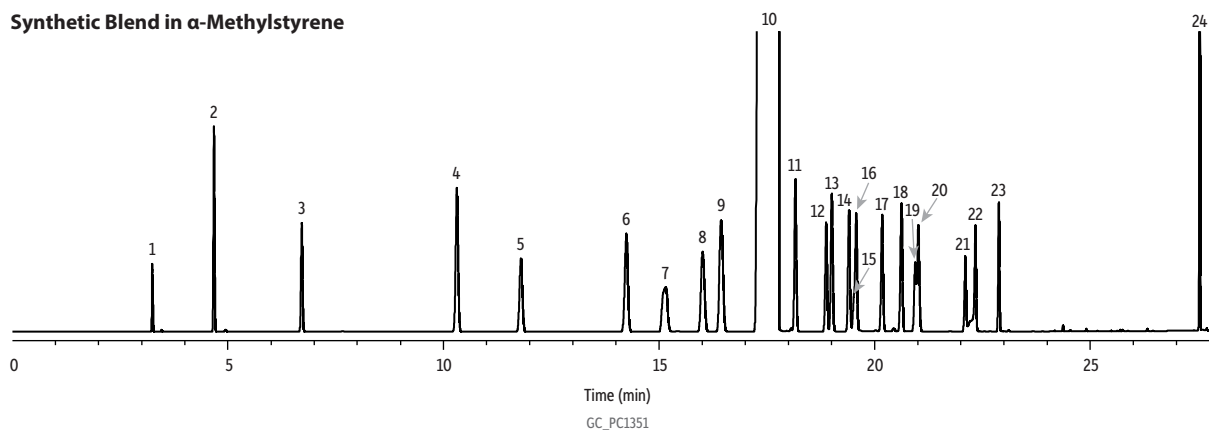


Impurities in α -Methylstyrene on Rtx-1

Purity Analysis of α -Methylstyrene



Synthetic Blend in α -Methylstyrene



Peaks	tr (min)	Peaks	tr (min)
1. Acetone	3.24	13. <i>sec</i> -Butylbenzene	19.00
2. Benzene	4.67	14. <i>m</i> -Cymene	19.40
3. Toluene	6.71	15. <i>cis</i> -2-Phenyl-2-butene	19.52
4. Ethylbenzene	10.31	16. <i>p</i> -Cymene	19.57
5. Styrene	11.80	17. <i>o</i> -Cymene	20.17
6. Cumene	14.24	18. Acetophenone	20.62
7. 3-Methyl-2-cyclopenten-1-one	15.15	19. 2-Phenyl-1-butene	20.94
8. <i>n</i> -Propylbenzene	16.01	20. <i>n</i> -Butylbenzene	21.01
9. Phenol	16.44	21. α -Methylstyrene oxide	22.10
10. α -Methylstyrene	17.76	22. 2-Phenylpropionaldehyde	22.34
11. <i>tert</i> -Butylbenzene	18.16	23. 2-Methylbenzofuran	22.88
12. Isobutylbenzene	18.87	24. <i>p-tert</i> -Butylcatechol	27.54

Column Rtx-1, 60 m, 0.32 mm ID, 1.00 μ m (cat.# 10157)
Sample α -Methylstyrene
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 7890A GC
Notes
 Top chromatogram: commercially available α -methylstyrene
 Bottom chromatogram: synthetic blend of impurities known to be present in α -methylstyrene at concentrations expected to be found in commercial samples.