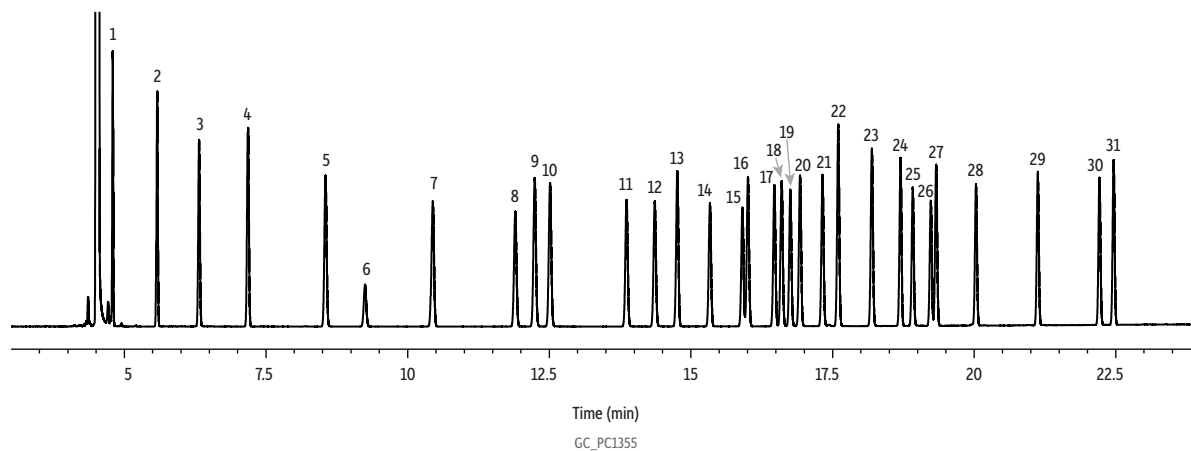


ASTM D7504: Impurities in Monocyclic Aromatic Hydrocarbons on Stabilwax



Peaks	tr (min)	Peaks	tr (min)
1. Octane	4.79	16. <i>m</i> -Ethyltoluene	16.02
2. Nonane	5.60	17. <i>tert</i> -Butylbenzene	16.49
3. Benzene	6.32	18. Isobutylbenzene	16.62
4. Decane	7.19	19. Mesitylene	16.77
5. Toluene	8.55	20. <i>sec</i> -Butylbenzene	16.94
6. 1,4-Dioxane	9.24	21. Styrene	17.32
7. Undecane	10.48	22. Allylbenzene	17.60
8. Ethylbenzene	11.90	23. 1,2,4-Trimethylbenzene	18.22
9. <i>p</i> -Xylene	12.25	24. Tridecane	18.75
10. <i>m</i> -Xylene	12.52	25. 1,3-Diethylbenzene	18.93
11. Cumene	13.88	26. 1,4-Diethylbenzene	19.25
12. <i>o</i> -Xylene	14.37	27. <i>n</i> -Butylbenzene	19.35
13. Dodecane	14.81	28. α -Methylstyrene	20.04
14. Propylbenzene	15.35	29. Phenylacetylene	21.12
15. <i>p</i> -Ethyltoluene	15.92	30. 1,4-Diisopropylbenzene	22.25
		31. <i>trans</i> - β -Methylstyrene	22.46

Column Stabilwax, 60 m, 0.32 mm ID, 0.25 μ m (cat.# 10627)
Sample D7504 resolution mix
Diluent: Cyclohexane
Injection
 Inj. Vol.: 0.6 μ L split (split ratio 100:1)
 Liner: Topaz 4.0 mm ID Precision inlet liner w/wool (cat.# 23305)
 Inj. Temp.: 250 °C
Oven
 Oven Temp.: 60 °C (hold 10 min) to 150 °C at 5 °C/min (hold 4 min)
Carrier Gas He, constant flow
 Flow Rate: 1.7 mL/min
Detector FID @ 265 °C
Instrument Agilent 7890B GC

Notes
 ASTM D7504 covers the determination of trace impurities in monocyclic aromatic hydrocarbons. It includes analysis of nonaromatic and individual aromatic compounds in benzene, toluene, ethylbenzene, *p*-xylene, *o*-xylene, styrene, and mixed xylenes. The chromatogram shows a synthetic blend of the most common analytes identified and quantified by D7504; all analytes are well resolved on a Stabilwax column.