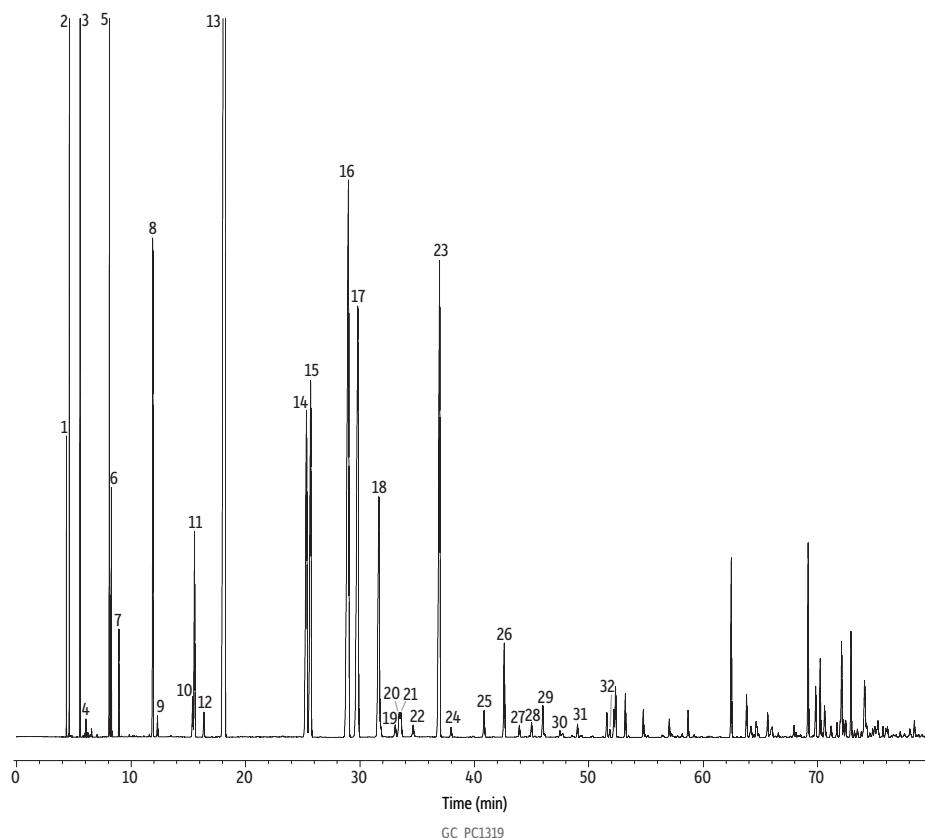


## Alkylate Standard on Rtx-DHA 50 by Method D5134-13



Peaks	Kovats RI @ 35 °C	D5134-13 RI Comparison	Linear RI	D5134-13 RI Comparison	Column Sample	Rtx-DHA-50, 50 m, 0.20 mm ID, 0.50 µm (cat.# 10147) ASTM D5134 qualitative reference alkylate standard (DCG Partnership I, LTD)
1. Isobutane	--	367.3	--	--	<b>Injection</b>	0.2 µL split (split ratio 200:1)
2. n-Butane	400.0	400.0	--	--	Inj. Vol.:	Premium 4.0 mm ID Precision inlet liner w/ wool (cat.# 23305)
3. Isopentane	475.0	475.0	--	--	Liner:	
4. n-Pentane	500.0	500.0	--	--	Inj. Temp.:	200 °C
5. 2,3-Dimethylbutane	565.4	565.5	--	--	<b>Oven</b>	
6. 2-Methylpentane	569.2	569.5	--	--	Oven Temp.:	35 °C (hold 30 min) to 200 °C at 2 °C/min
7. 3-Methylpentane	583.1	583.4	--	--	<b>Carrier Gas</b>	He, constant pressure
8. 2,4-Dimethylpentane	629.9	630.3	--	--	Linear Velocity:	23 cm/sec
9. 2,2,3-Trimethylbutane	635.1	635.4	--	--	<b>Detector</b>	FID @ 250 °C
10. 2-Methylhexane	667.2	667.8	--	--	Make-up Gas Flow Rate:	30 mL/min
11. 2,3-Dimethylpentane	668.6	669.1	--	--	Make-up Gas Type:	N <sub>2</sub>
12. 3-Methylhexane	675.5	676.2	--	--	Hydrogen flow:	40 mL/min
13. 2,2,4-Trimethylpentane	689.9	688.7	--	--	Air flow:	370 mL/min
14. 2,2,3-Trimethylpentane/2,5-dimethylhexane	731.5*	731.9	--	--	<b>Instrument Notes</b>	Agilent 7890B GC
15. 2,4-Dimethylhexane	733.2*	733.5	--	--		Understanding the hydrocarbon components in petroleum samples is useful for sample characterization, determining product quality, planning and modeling of refinery processes, and also for regulatory purposes. ASTM D5134-13 provides the composition of paraffin, naphthenes, and monoaromatic compounds up to n-C9 in petroleum naphthas, reformates, and alkylates.
16. 2,3,4-Trimethylpentane	747.1*	747.8	--	--		This method is run using a long, narrow-bore column, which has a limited sample loading capacity. Therefore, high split is used and a small sample volume is injected. Restek's Rtx-DHA-50 column is a good match for this analysis; retention index (RI) data are in agreement with the RI data provided in the method.
17. 2,3,3-Trimethylpentane	750.0*	751.1	730.4*	730.2		
18. 2,3-Dimethylhexane	--	--	744.4*	743.6		
19. 2-Methylheptane	--	--	754.0*	754.1		
20. 4-Methylheptane/3,4-dimethylhexane (isomer)	--	--	756.3*	756.0		
21. 3,4-Dimethylhexane (isomer)	--	--	763.6*	763.4		
22. 3-Methylheptane	--	--	754.0*	754.1		
23. 2,2,5-Trimethylhexane	--	--	779.7*	778.8		
24. 2,2,4-Trimethylhexane	--	--	786.4*	785.1		
25. 2,4,4-Trimethylhexane	--	--	805.4	805.7		
26. 2,3,5-Trimethylhexane	--	--	817.4	817.7		
27. 2,4-Dimethylheptane	--	--	826.1	826.6		
28. 2,6-Dimethylheptane	--	--	833.4	833.8		
29. 2,5-Dimethylheptane	--	--	839.9	840.3		
30. 2,3,4-Trimethylhexane	--	--	849.7	--		
31. 2,3-Dimethylheptane	--	--	860.0	860.4		
32. 2,4,6-Trimethylheptane	--	--	878.6	--		

\*Extrapolated from n-C6 and n-C7 or from n-C8 and n-C9