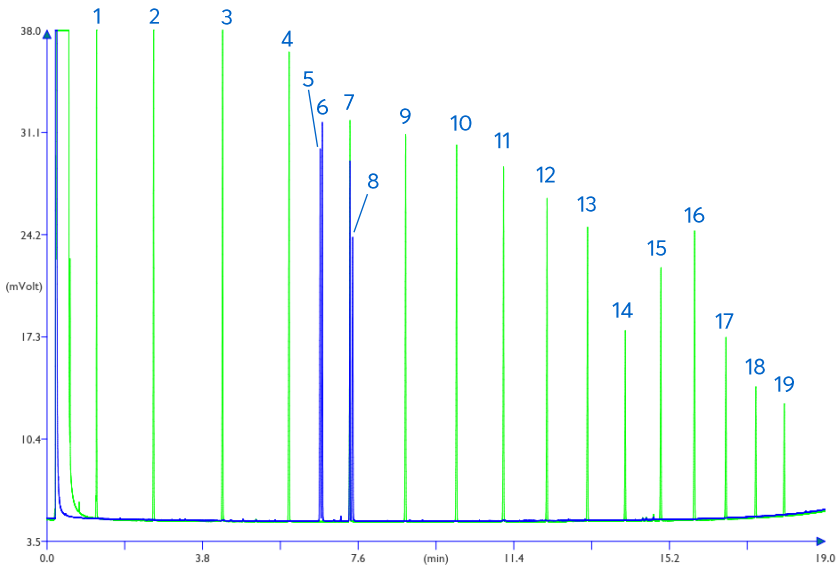
Chromatography Solutions

Application note # C-13193

Separation of TPH (Total Petroleum Hydrocarbons) using the HI-SE54 HT Column



1. C10
2. C12
3. C14
4. C16
5. C17
6. Pristane
7. C18
8. Phytane
9. C20
10. C22
11. C24
12. C26
13. C28
14. C30
15. C32
16. C34
17. C36
18. C38
19. C40

Figure 1: Separation of TPH (Total Petroleum Hydrocarbons) using the Avantor® Hichrom HI-SE54 HT phase. (Green chromatogram: C10-C40 alkane mix (50 mg/L), Blue chromatogram: fuel oil degradation mix (2000 µg/mL)).

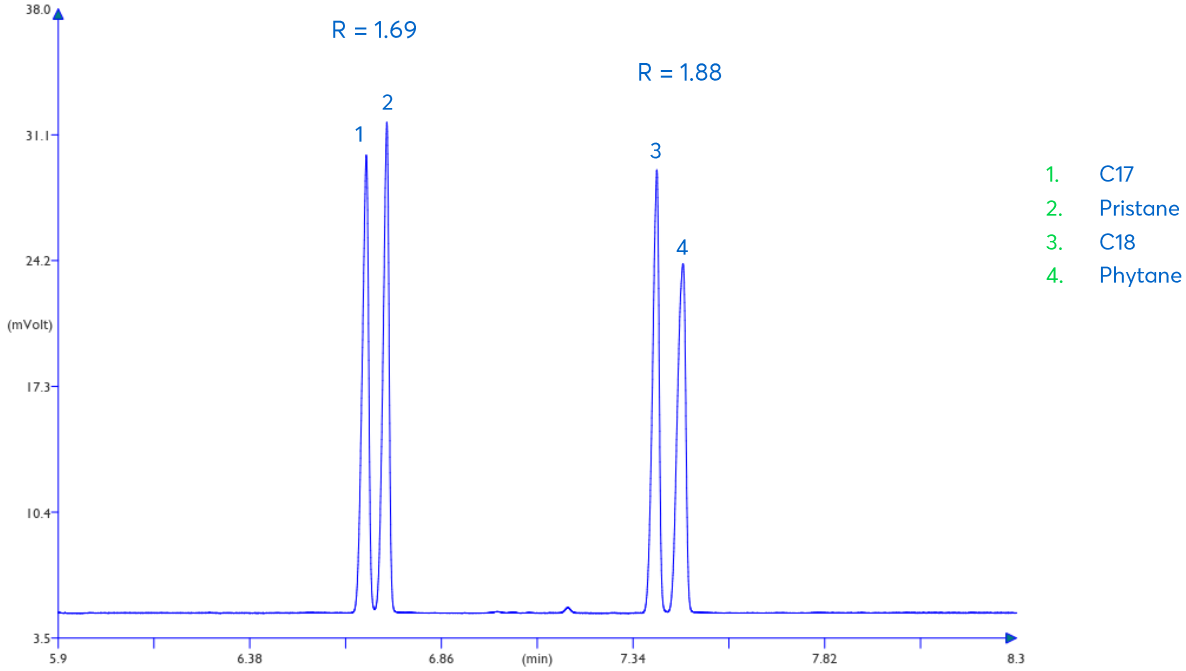


Figure 2: Magnified image of the blue chromatogram for the separation of C17 and Pristane, C18 and Phytane in the fuel oil degradation mix (2000 µg/mL).

Method Details

CONDITIONS

Oven Program:	50 °C, 15 °C/min, 360 °C
Carrier Gas:	Hydrogen, 110 kPa
Injector:	Split 300 °C, 50 mL/min split flow, 0.2 µL injection volume
Detector:	FID, 370 °C
Samples:	C10-C40 Alkane Mix (50 mg/L) Fuel Oil Degradation Mix (2000 µg/mL)

The HI-SE54 HT is a high temperature general purpose column with a low-polarity 5% phenyl, 1% vinyl, 94% methyl polysiloxane phase composition. It is well suited for the analysis of high boiling petroleum products and long chained hydrocarbons.

ORDERING TABLE

Product	Details	Dimensions	Part Number
Avantor® Hichrom HI-SE54 HT	GC Column	0.15 mm, 0.10 µm, 10 m	HI91-15-010-10

Avantor®