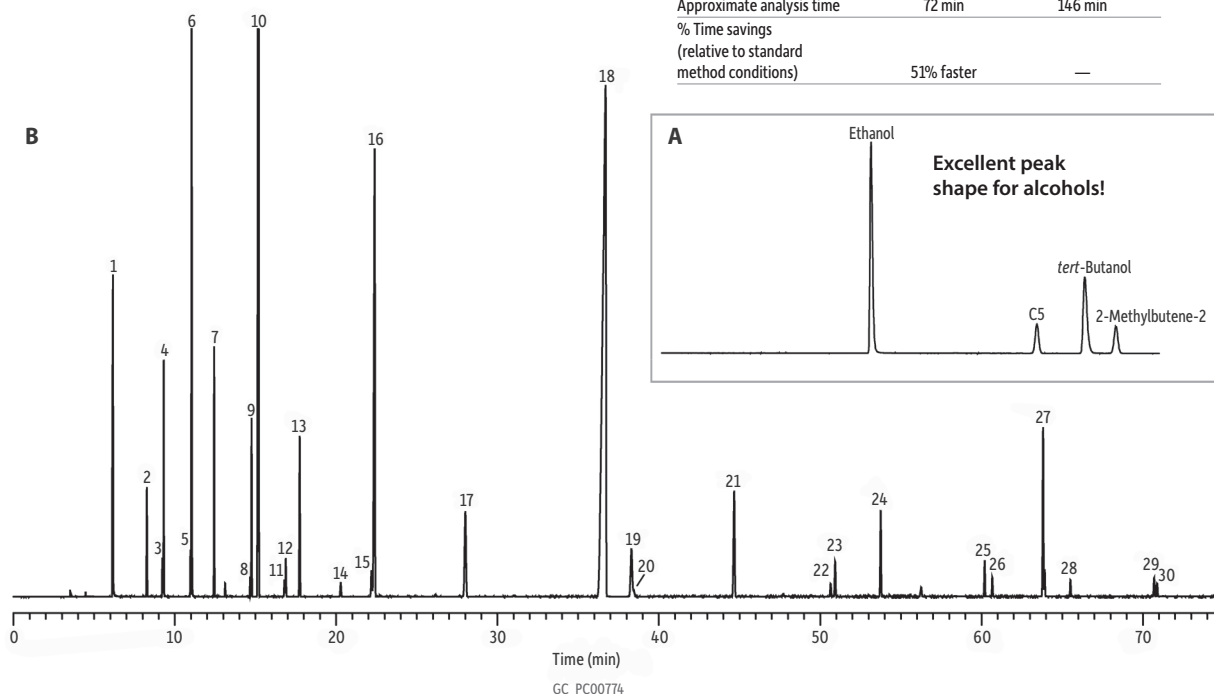


Fast Detailed Hydrocarbons Analysis (DHA) on Rtx-DHA-100 / Rtx-5 DHA

	Optimized D6730 with hydrogen	Standard D6730 conditions
Approximate analysis time	72 min	146 min
% Time savings (relative to standard method conditions)	51% faster	—



Column Rtx-DHA-100, 100 m, 0.25 mm ID, 0.50 μ m (cat.# 10148)
using Rtx-5 DHA tuning column* 2-5 m, 0.25 mm ID,
DHA/oxygenates setup blend

Sample
Injection
Inj. Vol.: 0.1 μ L split (split ratio 150:1)
Liner: 4 mm ID deactivated cup inlet liner (cat.# 20835 [replaced by 20836])
Inj. Temp.: 250 °C

Oven
Carrier Gas H₂, constant flow
Flow Rate: 3.62 mL/min
Linear Velocity: 55 cm/sec
Detector FID @ 300 °C
Notes

*Note that the exact length of the tuning column was determined experimentally based on the resolution of critical pairs as per method D6730-01 (reapproved 2011).

Oven Temp.
A: 35 °C
B: 5 °C (hold 8.32 min) (elute C5) to 48 °C at 22 °C/min (hold 26.32 min) (elute ethylbenzene) to 141 °C at 3.20 °C/min (elute C12) to 300 °C at 1 °C/min

A: Front end of DHA/oxygenates setup blend
C5 Efficiency: 586,825 plates
C5 k': 0.476
tert-Butanol skew: 2.10
Resolution: *tert*-Butanol/2-methylbutene-2: 5.39

Acknowledgement Chromatogram courtesy of Neil Johansen, Inc., Aztec, New Mexico, in association with Envantage Analytical Software, Inc., Cleveland, Ohio.

Peaks

- Ethanol
- Pentane (C5)
- tert*-Butanol
- 2-Methylbutene-2
- 2,3-Dimethylbutane
- Methyl *tert*-butyl ether (MTBE)
- Hexane (C6)
- 1-Methylcyclopentane
- Benzene
- Cyclohexane
- 3-Ethylpentane
- 1,2-Dimethylcyclopentane
- Heptane (C7)
- 2,2,3-Trimethylpentane
- 2,3,3-Trimethylpentane
- Toluene
- Octane (C8)
- Ethylbenzene
- p*-Xylene
- 2,3-Dimethylheptane
- Nonane (C9)
- 5-Methylnonane
- 1,2-Methylethylbenzene
- Decane (C10)
- Undecane (C11)
- 1,2,3,5-Tetramethylbenzene
- Naphthalene
- n*-Dodecane (C12)
- 1-Methylnaphthalene
- Tridecane (C13)