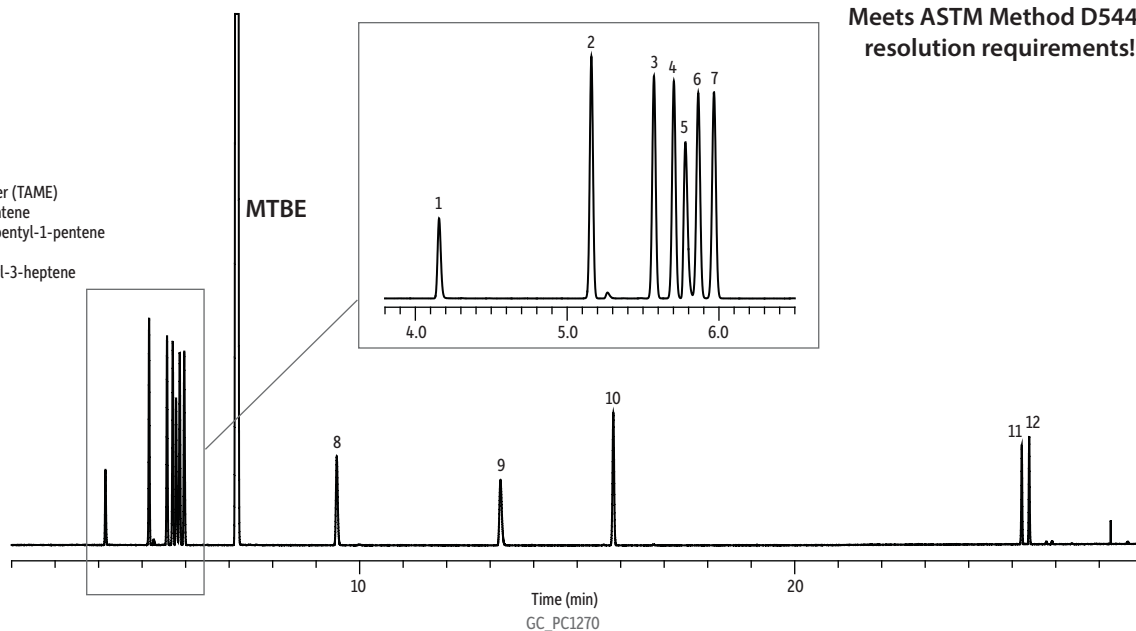


## Impurities in Methyl-*t*-Butyl Ether (MTBE) on Rtx®-DHA-50 (ASTM D5441)

- Peaks**
1. Methanol
  2. iso-Pentane
  3. *n*-Pentane
  4. *trans*-2-Pentene
  5. *tert*-Butanol
  6. *cis*-2-Pentene
  7. 2-Methyl-2-butene
  8. *tert*-Butyl ethyl ether (TAME)
  9. *tert*-Amyl methyl ether (TAME)
  10. 2,4,4-Trimethyl-1-pentene
  11. 4,4'-Dimethyl-2-neopentyl-1-pentene (triisobutylene)
  12. 2,2,4,6,6-Pentamethyl-3-heptene (triisobutylene)



Meets ASTM Method D5441 resolution requirements!

**Column** Rtx®-DHA-50, 50 m, 0.20 mm ID, 0.50 µm (cat.# 10147)  
**Sample** ASTM D5441 MTBE contaminants mix  
**Conc.:** 1% (w/w) each component in MTBE  
**Injection**  
**Inj. Vol.:** 0.2 µL split (split ratio 200:1)  
**Liner:** Cup splitter (cat.# 20710)  
**Inj. Temp.:** 200 °C  
**Oven**  
**Oven Temp.:** 40 °C (hold 13 min) to 180 °C at 10 °C/min (hold 3 min)  
**Carrier Gas** He, constant flow  
**Flow Rate:** 0.9 mL/min  
**Linear Velocity:** 23 cm/sec @ 40 °C

GC\_PC1270

**Detector** FID @ 250 °C  
**Make-up Gas**  
**Flow Rate:** 24 mL/min  
**Make-up Gas**  
**Type:** N<sub>2</sub>  
**Hydrogen flow:** 30 mL/min  
**Air flow:** 350 mL/min  
**Instrument** Agilent 7890B GC  
**Notes** Resolution between *trans*-2-pentene/*tert*-butanol and *tert*-butanol/*cis*-2-pentene meets the ASTM Method D5441 requirement of R ≥ 1.3.

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