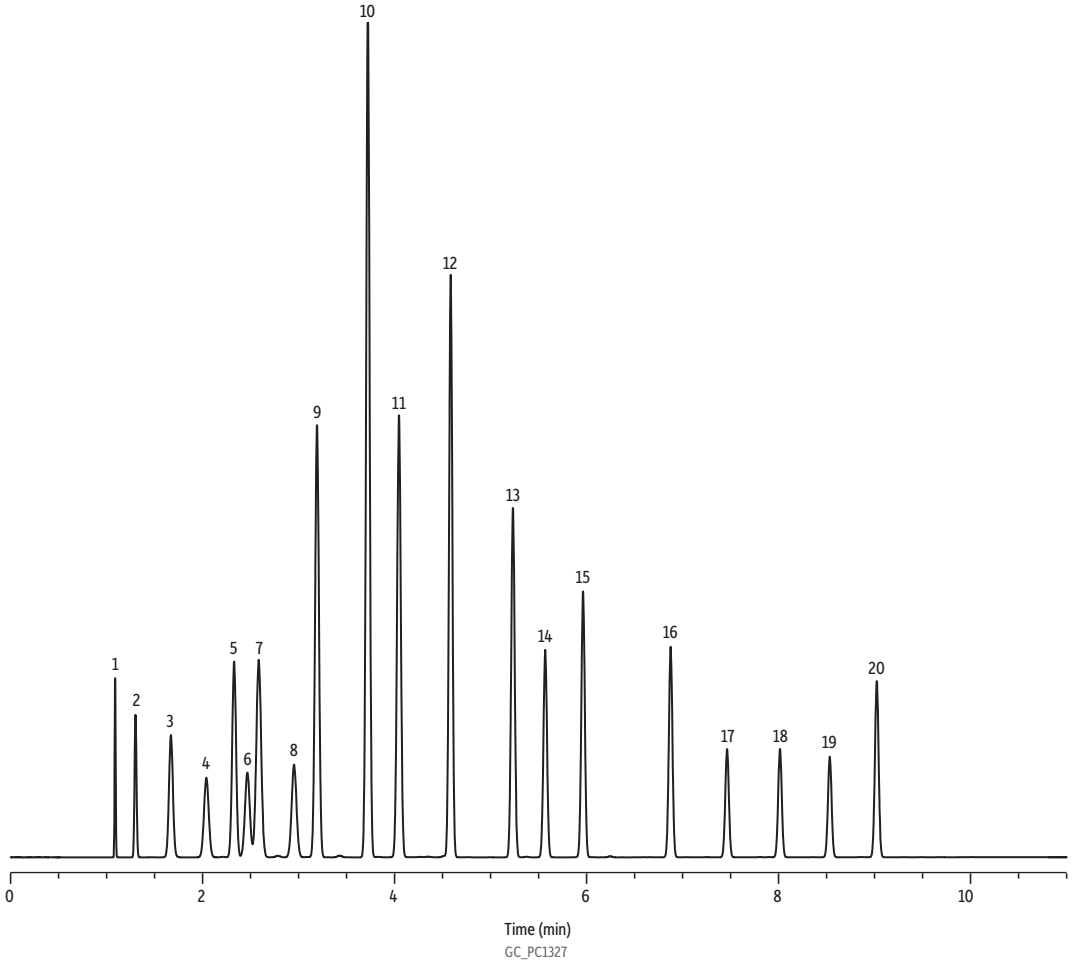
## Simulated Distillation of Gasoline with Oxygenates on MXT-1 (ASTM D7096-16)




| Peaks | $t_R$ (min) | Conc. (vol.%) | Peaks | $t_R$ (min) | Conc. (vol.%) |
|---|---|---|---|---|---|
| 1. Methanol | 1.089 | 4.1 | 11. *n*-Octane | 4.046 | 5.1 |
| 2. Ethanol | 1.302 | 4.1 | 12. *p*-Xylene | 4.585 | 8.2 |
| 3. *tert*-Butanol | 1.670 | 4.1 | 13. *n*-Propylbenzene | 5.233 | 5.1 |
| 4. MTBE | 2.039 | 4.1 | 14. *n*-Decane | 5.569 | 4.1 |
| 5. *n*-Hexane | 2.329 | 6.1 | 15. *n*-Butylbenzene | 5.964 | 4.1 |
| 6. ETBE | 2.467 | 4.1 | 16. *n*-Dodecane | 6.876 | 4.1 |
| 7. 2,4-Dimethylpentane | 2.585 | 6.1 | 17. *n*-Tridecane | 7.464 | 2.0 |
| 8. TAME | 2.953 | 4.1 | 18. *n*-Tetradecane | 8.015 | 2.0 |
| 9. *n*-Heptane | 3.192 | 10.2 | 19. *n*-Pentadecane | 8.533 | 2.0 |
| 10. Toluene | 3.722 | 12.2 | 20. *n*-Hexadecane | 9.023 | 4.1 |

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| **Column** | MXT-1, 30 m, 0.53 mm ID, 5.00 µm (cat.# 70179) |
| **Sample** | D7096 custom standard with oxygenates |
| **Injection** | |
| Inj. Vol.: | 1 µL split (split ratio 50:1) |
| Liner: | Topaz 4.0 mm ID Precision inlet liner w/wool (cat.# 23305) |
| Inj. Temp.: | 250 °C |
| **Oven** | |
| Oven Temp.: | 40 °C (hold 1 min) to 245 °C at 25 °C/min (hold 4 min) |
| **Carrier Gas** | He, flow program |
| Flow Program: | 5 mL/min (hold 0.5 min) to 20 mL/min at 60 mL/min/min |
| **Detector** | FID @ 250 °C |
| Constant Column + | |
| Constant Make-up: | 30 mL/min |
| Make-up Gas Type: | He |
| Hydrogen flow: | 40 mL/min |
| Air flow: | 400 mL/min |
| **Instrument** | Agilent 7890B GC |