

Oxygenates, Benzene, and Toluene in Blended Motor Fuels

Configuration of an Agilent Technologies 7890 Series Gas Chromatograph with flame ionization and thermal conductivity detectors (FID/TCD)

Oxygenates in Gasoline (ASTM D5599) by oxygenate flame ionization detector (O-FID) Benzene and Toluene in Blended Motor Fuels (ASTM D3606).

Determined Components for oxygenate-specific O-FID:

- Methyl tert-butylether (MTBE)
- Ethyl tert-butylether (ETBE)
- tert-Amylmethylether (TAME)
- Diisopropylether (DIPE)
- Methanol
- Ethanol
- Isopropanol
- n-Propanol
- Isobutanol
- tert-Butanol
- sec-Butanol
- n-Butanol
- tert-Pentanol
- Dimethoxyethane

Determined Components using TCD method:

- Benzene
- Toluene

The lower quantifiable limit for the O-FID is 0.10 wt%. A lower quantifiable limit of 0.12% is expected for benzene and toluene.