

Spark Ignition Fuel Containing Ethanol on D3606 Application Column Set by ASTM D3606-20

- Accurate quantitation of benzene and toluene with no interference from ethanol.
- <14 minutes analysis time.
- Complete resolution of benzene and toluene from other fuel components.

Peaks	tr (min)	Conc.
1. Ethanol	7.21	<10%
2. Benzene	8.40	<5%
3. 2-Butanol (IS)	9.57	4%
4. Toluene	12.22	<20%

Column D3606 application column (2 column set). Column 1: Sulfinert tubing, 6 ft (1.8 m), 2.00 mm ID, 0.125 in OD; Rt-D3606-1 proprietary packing material. Column 2: Sulfinert tubing, 15.5 ft (4.7 m), 2.00 mm ID, 0.125 in OD; Rt-D3606-2 proprietary packing material (cat.# 83606A-800)
Sample Gasoline (87 octane with ethanol) spiked with internal standard (IS)
Conc.: Neat

Injection
Inj. Vol.: 1.5 µL packed not on-column
Liner: Topaz 2.0 mm ID straight inlet liner (cat.# 23313)
Inj. Temp.: 200 °C

Oven
Oven Temp.: 135 °C (hold 15 min)
Carrier Gas He, constant flow
Flow Rate: 25 mL/min @ 135 °C

Detector TCD @ 200 °C

Instrument Agilent/HP6890 GC

Notes Valve box temperature: 150 °C
Backflush (valve) times for this column set are:

- Valve on at ~4.3.0 minutes
- Valve off at 12.0 minutes

Note that backflush times must be determined for each GC system. To determine the backflush time, analyze ASTM backflush standard (cat. # 30671) following the procedure described in the instruction sheet for the D3606 column set. Then, multiply the result by the algorithm 2.33.

