

Application Data Sheet

No.41

System Gas Chromatograph

Methanol and Ethanol in LPG analysis system Nexis GC-2030DFC1 GC-2014DFC1

This method uses a new micro column switching technique (2D-GC) to determine methanol and ethanol in LPG. The chemical composition range of LPG is shown in the table. Compared to traditional valve switching techniques, this test method with a digital APC switch is much easier and simpler. Only one Aux-APC and three columns are applied in this GC system. Using a pre-column, all the components are separated into two main parts; the first part is hydrocarbons, the second part is methanol and ethanol. When APC2 is ON and APC1 is OFF, the hydrocarbons pass through col-2 (Alumina capillary column), are separated, and detected by FID-2. Immediately before the second part of the compounds are eluted out of the pre-column, turn on APC1 and shut off APC2. The methanol and ethanol pass through col-2, are separated, and detected by FID-2. The system includes LabSolutions GC workstation software.

Analyzer Information

System Configuration:

Three capillary column with two FID detectors

Sample Information:

C1~C5 ,Methanol,Ethanol

Concentration Range:

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
1	C1-C5	0.1ppm	90.0%
2	MeOH	0.1ppm	10.0%
3	EtOH	0.1ppm	10.0%

Detection limits may vary depending on the sample.
Please contact us for more consultation.

System Features

- 11 minutes analysis can be carried out for all compounds
- Single channel with three capillary columns by using FID detector

Typical Chromatograms

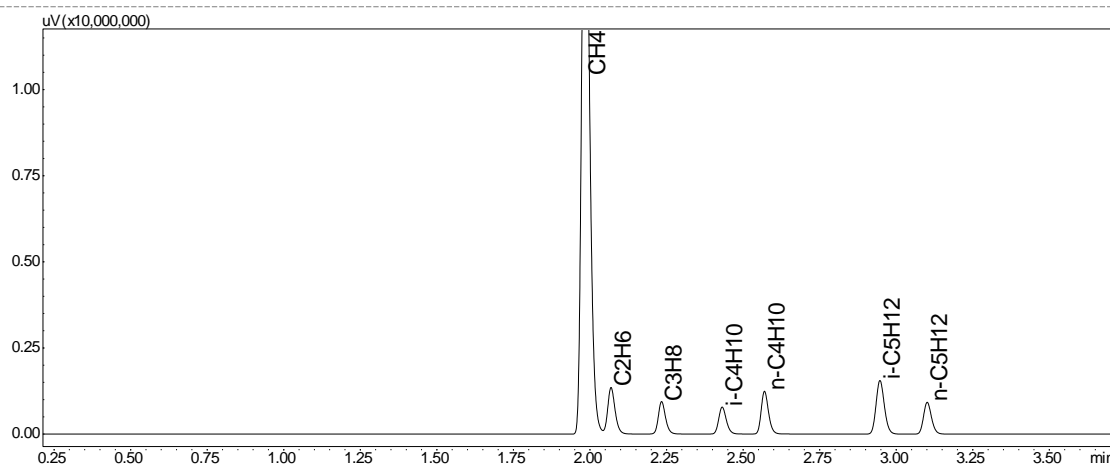


Fig. 1 Chromatogram of FID-1

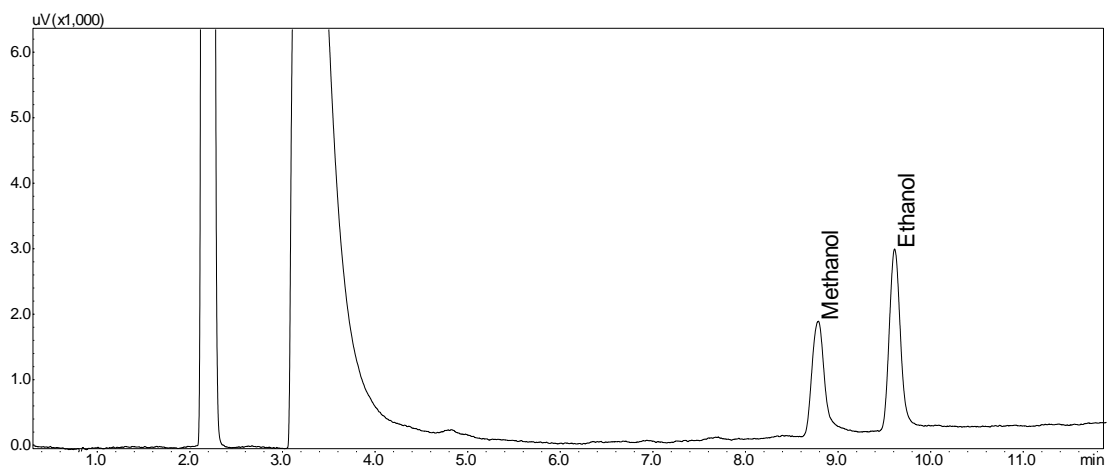


Fig. 2 Chromatogram of FID-2