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

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Compound</th>
<th>Concentration Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C1-C5</td>
<td>0.1ppm</td>
</tr>
<tr>
<td></td>
<td>Methanol</td>
<td>0.1ppm</td>
</tr>
<tr>
<td></td>
<td>Ethanol</td>
<td>0.1ppm</td>
</tr>
</tbody>
</table>

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

![Chromatogram of FID-1](Fig. 1 Chromatogram of FID-1)
Fig. 2  Chromatogram of FID-2

Methanol
Ethanol