System Gas Chromatograph

High Sensitive CO, CO₂, CH₄ Analysis
Nexis GC-2030CCC1
GC-2014CCC1

This system is designed to measure a trace amount of carbon monoxide (CO), methane (CH₄) and carbon dioxide (CO₂) in a gas sample. The sample is injected automatically through a 10-port valve. CO and CO₂ are reduced to CH₄ by means of a nickel catalyst and detected by a flame ionization detector (FID). If a sample contains a high concentration of CO, CO₂ and CH₄, a TCD can be used instead of an FID. If the matrix contains O₂, the concentration should be less than 0.1%. The system includes LabSolutions GC workstation software.

Analyzer Information

System Configuration:
One valve / two packed columns / Methanizer with FID detector

Sample Information:
CO, CO₂, CH₄

Concentration Range:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Compound</th>
<th>Low Conc.</th>
<th>High Conc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CO</td>
<td>1.0ppm</td>
<td>10ppm</td>
</tr>
<tr>
<td>2</td>
<td>CO₂</td>
<td>1.0ppm</td>
<td>100ppm</td>
</tr>
<tr>
<td>3</td>
<td>CH₄</td>
<td>1.0ppm</td>
<td>100ppm</td>
</tr>
</tbody>
</table>

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

System Features

- Single channel with packed columns
- Hydrocarbons are backflushed by the pre-column while trace CO, CO₂, and CH₄ pass through a methanizer and detected with FID
- 6 minutes analysis time

Typical Chromatograms

![Chromatogram of FID](image)