

# Application Data Sheet



### System Gas Chromatograph

## High Sensitive CO, CO<sub>2</sub>, CH<sub>4</sub> Analysis Nexis GC-2030CCC5 GC-2014CCC5

This system is designed to measure a trace amount of carbon monoxide (CO), methane (CH4) and carbon dioxide (CO2) in an O2 gas sample. The sample is injected automatically through a 10-port valve. First, a Porapak-N pre-column is used to cut the C2 compounds. Second, Porapak functions to separate CO/CH4 and CO2. CO and CH4 are separated by an MS-13X column. Since a large amount of O2 gas affects the lifetime of a methanizer catalyst, the O2 gas needs to be removed using an additional 6-port valve. Conversely, CO2 moves through the Porapak-Q. CO/CH4 and CO2 pass through the methanizer device and converted to methane for detection by FID. The system includes Lab Solutions GC workstation software.

#### Analyzer Information

### System Configuration:

Three valves / four packed columns / Methanizer with FID detector **Sample Information:** CO, CO<sub>2</sub>, CH<sub>4</sub>

#### **Concentration Range:**

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
1	СО	1.0ppm	100ppm
2	CO2	1.0ppm	100ppm
3	CH4	1.0ppm	100ppm

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

#### System Features

- Single channel with packed columns
- Matrix O<sub>2</sub> are removed by the third valve by using cutting technology
- •Hydrocarbons and water are backflushed by the pre-column while trace CO, CO<sub>2</sub>, and CH<sub>4</sub> reach FID
- Good separate CH<sub>4</sub> and CO with MS-13X packed column
- 13 minutes analysis time



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