

# Application Data Sheet



### System Gas Chromatograph

## Composition of H<sub>2</sub> – C<sub>2</sub>H<sub>2</sub> Analysis Nexis GC-2030HC2 GC-2014HC2

A simple and efficient method based on the technique of valve switching is developed for the analysis of H2, Ar, O2, CO, CH4, CO2 and C2. A total of 3 valves and 6 columns are used in this GC system. Sample is introduced into one sample loop for determination. H2 is detected by TCD-1. The other permanent gases and CH4 are directed into column-2 through Valve 2. Ar, O2, N2, CH4 and CO flow through column-3(MS-13X), are separated and detected by TCD-2. CO2 and the light hydrocarbons are directed on to a porous polymer column for separation and detected by TCD 2.

#### **Analyzer Information**

### System Configuration:

Three valves / six packed columns with two TCD detectors

Sample Information: H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar, CO, CO<sub>2</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, C<sub>2</sub>H<sub>2</sub> Methods met: ASTM-D1945

### **Concentration Range:**

No.	Name of Compound	Concentration Range		Detector
		Low Conc.	High Conc.	Detector
1	H2	0.05%	100%	TCD-1
2	Ar+O2	0.05%	30%	TCD-2
3	N2	0.05%	100%	TCD-2
4	CH4	0.05%	90%	TCD-2
5	СО	0.05%	50%	TCD-2
6	CO2	0.05%	60%	TCD-2
7	C2H6	0.05%	50%	TCD-2
8	C2H4	0.05%	50%	TCD-2
9	C2H2	0.05%	10%	TCD-2

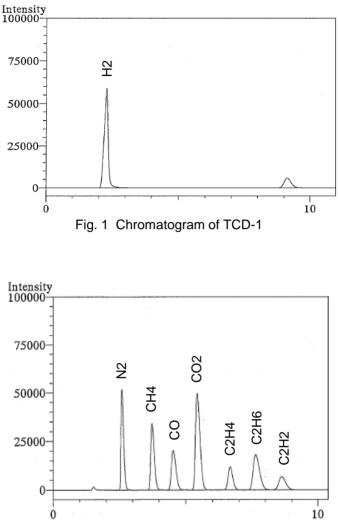
Detection limits may vary depending on the sample. Please contact us for more consultation.

#### System Features

· Versatile software easy GC system operation

- Dual TCD channels
- Good repeatability

#### **Typical Chromatograms**



Ó Fig. 2 Chromatogram of TCD-2

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