



# Application Data Sheet



# System Gas Chromatograph

TOGAS Analysis System with manual sampling Nexis GC-2030TOGAS3 GC-2014TOGAS3

A simple and efficient method based on the technique of manual sampling and valve switching is developed for the analysis of TOGAS. The sample is directed into main-column-1 (P-N) through headspace, and separated in groups. The permanent gas and CH4 are directed into main-column-2 (MS-13X) through 2-1. H2, CH4, and CO are detected by PDHID, and O2, N2 are detected by TCD with additional valve switching. CO2 reduced into CH4 by a methanizer is detected by FID. Valve switching occurs before the CO2 is directed into main-column-2. The other hydrocarbons and CO2 are directed into main-column-3 (P-T) through 6-5. They are detected by FID. After the detection of C4H10, the valve is immediately backed to its original position to wait for the next analysis. A headspace injector can be connected to configure TOGAS analysis with a headspace device. The system includes LabSolutions GC workstation software.

### Analyzer Information

## System Configuration:

Three valves / four packed columns / TCD / PDHID/ Methanizer with FID

#### Sample Information:

H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, CH<sub>4</sub>, CO, CO<sub>2</sub>, C<sub>2</sub> in transformer oil

Methods met: ASTM-D3612C

#### **Concentration Range:**

No.	Name of Compound	Concentration Range	
		Low Conc.	High Conc.
1	H2	0.1ppm	500ppm
2	02	50.0ppm	50000ppm
3	N2	50.0ppm	50000ppm
4	CH4	0.1ppm	500ppm
5	СО	0.1ppm	500ppm
6	CO2	1.0ppm	1000ppm
7	C2H6	0.1ppm	10000ppm
8	C2H4	0.1ppm	10000ppm
9	C2H2	0.1ppm	10000ppm
10	C3H8	0.2ppm	10000ppm
11	C3H6	0.2ppm	10000ppm
12	i-C4H10	1.0ppm	10000ppm

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

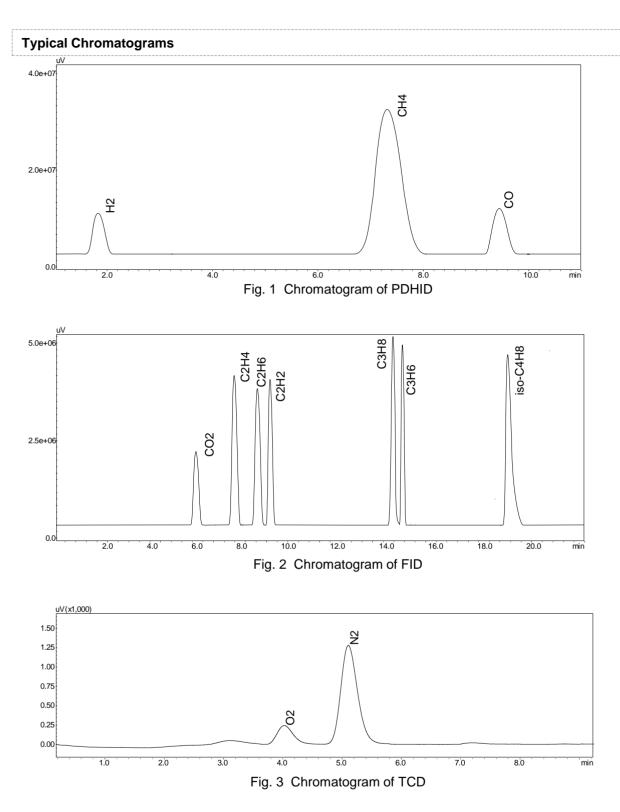
#### System Features

· Single channel with packed columns

Manual sampling and valve switching with optional head space

16 minute analysis time

•Trace level of CO and CO2 are deoxidized into CH4 by Methanizer and detected by FID



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