LABTRON

Gas Chromatography

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Gas chromatography

Gas chromatography LGC-A10

This gas chromatography system comes with different detectors and each detector individually controls the temperature of the system. This gas chromatography comes with packed column injectors, split/split less injectors, capillary and cool-on column. It is possible to achieve lower limit of detection using these unique injector system. This gas chromatography system gives accurate, high precision control, reliable results.

Features

- Functions of self-diagnosis for boot, stopwatch (for determining the flow)
- Available with different optional detectors e.g. FID, ECD, FPD, NPD
- Temperature control accuracy of 0.01 using new integrated digital electronic circuit
- Unique injectors system

Applications

The multifunctional and remotely controllable gas chromatograph system is widely used in the analysis of oil extraction and refining industry, petrochemical analysis, gas industry and in quality control of medicines, food, chemicals.

Specifications

Model no.	LGC-A10
Column oven	
Furnace dimension	280mm×300mm×180mm
Temperature operating range	Higher than the room temperature of 5°C-450°C
Temperature setting precision	1°C
Maximum programmed heating speed	120°C/min
Temperature stability	0.01°C for 1°C change in the environmental temperature
Programmed temperature steps	7 steps
Temperature setting	1°C; programmed heating rate 0.1°C
Column loss can be compensated (dual channel column)	
Injectors	packed column injectors, split/split less capillary column injectors, cool on-column injectors

Gas chromatography

Detectors	
FID	**TCD**
Maximum temperature control: 400°C	Maximum temperature control: 400°C
LOD: ≤5×10^{12} g/s [n-C_{16}]	LOD: ≥10000mv.ml/mg [n-C_{16}]
Linear dynamic range: ≥10^7	Linear dynamic range: ≥10^4
Drift: ≤5×10-^{13}A/30min	Drift: ≤10μV/30min
Noise: ≤2×10^{-13} A	Noise: ≤20μA
FPD	**ECD**
Maximum temperature control: 250°C	Maximum temperature control: 350°C
LOD: ≤2×10^{-13} g/s (P), ≤5×10^{-11} g/s (S)	LOD: ≤1×10^{-14} g/ml (y-666)
Linear dynamic range: ≥10^3 (P), ≥10^2 (S)	Linear dynamic range: ≥10^4
Drift: ≤4×10^{-11}A/30min	Drift: ≤5 μV/30min
Noise: ≤2×10^{-12} A	Noise: ≤20μA
NPD	**PDHID**
Maximum temperature control: 400°C	LOD: ≤5ppb
LOD: ≤5×10^{-13} g/s (P), ≤1×10^{12} g/s (N)	
Linear dynamic range: ≥10^3 (P), ≥10^3 (N)	
Drift: ≤2.5×10^{-12}A/30min	
Noise: ≤4×10^{-13} A	

Gas chromatography LGC-A11

This gas chromatography system has superior detectors with the high-precision electronic control system. This system has the characteristic self-ignition and hydrogen leakage self-protection. This system has accurate tracking design and programmed heating control for the furnace temperature. With the help of blowback function of the chromatograph column, analysis time can be saved in this gas chromatography system.

Features

- EPC controlled injector, column carrier, detector gas flow to ensure accurate flow of the system
- Available with different optional detectors e.g. FID, TCD, EPD, FPD, NPD
- Quick heating and cooling
- Six individual controlling heating areas

Gas chromatography

Applications

This gas chromatography system has applications in quality supervision of medicines, foods and chemicals, oil extraction and refining industry, petrochemical industry, electronic high-purity gas industry and scientific research institutes.

Specifications

Model no.	LGC-A11
Column oven	
Furnace dimension	280mm×300mm×180mm
Temperature controlling range	Higher than the room temperature of 5°C-450°C, liquid nitrogen cold trap -80°C -400°C, dry ice cold trap -55°C to 400°C
Temperature setting precision	0.1°C
Maximum programmed heating speed	120°C/min
The longest method run time	999.99min
Programmed temperature steps	7 steps
Programmed heating rate	0.1-120°C/min (increment of 0.1°C)
Column loss can be compensated (dual channel column)	
Heating area	Six individual controlling heating areas
Maximum temperature in auxiliary heating areas	300°C
Detectors	
FID	**TCD**
Maximum using temperature: 450°C	Maximum using temperature: 400°C
Minimum LOD: ≤2.5pgC/s [n-C_{16}]	Minimum LOD: <400 pgC_3H_8/ml(He)
Linear dynamic range: 10^7 (±10%)	Linear dynamic range: 10^5 (±5%)
Data collection frequency: Maximum 100 Hz	Data collection frequency: Maximum 100 Hz
Adapted to packed column and capillary column	The design of monofilament TCD and Micro-ECD , adapted to packed column and capillary column

Gas chromatography

FPD	ECD
Maximum using temperature: 250°C	Maximum using temperature: 400°C
Minimum LOD: <4 pg S/sec, <1 pg P/sec	Type of gas compensation detector : 5% methane, argon, nitrogen
Linear dynamic range: $>10^3$S, $>10^4$P	Minimum LOD: $>10^7$s, $>10^7$p
Optional: 10^5gS/gC, 10^6gP/gC	Linear dynamic range: 5×10^5
	Data collection frequency: Maximum 100 Hz
	Radioactive source: <12mCi 63Ni
Adapted to packed column and capillary column	Adapted to packed column and capillary column

NPD
Maximum using temperature: 450°C
Minimum LOD: <0.2 pg N/sec, <0.2 pg P/sec
Minimum LOQ: < 3 pg/sec
Linear dynamic range: 10^5N, 10^5P
Adapted to packed column and capillary column

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