

GC - 342

Gas Chromatograph



GC-342 Gas Chromatograph

This Gas Chromatograph is made according to international standards; its technical feature and index are conform with updated analytical level.

The GC-342 is a cost effective gas chromatograph with highly developed self-diagnostic, self-protective functions, simple operation and user friendly. All parameters can be entered via keyboard. The GC-342 is a flexible instrument with wide choice of detectors, injectors and columns that can be set in various combinations according to customer's applications.

The GC-342 gas chromatograph is suitable for quality control in various fields in chemistry, medicine and food industries, and also applicable to quarantine, environment protection, quality supervision, oil, petrochemical industry, forensic analysis, agriculture and commodity inspection.

Features:

> **Self-diagnostic function:**

- 1) Core tests;
- 2) Automatic tests;
- 3) Extended tests;
- 4) Basic tests;

Monitor the status of GC continuously. Once finding faults, it'll display the information and show the wrong zone and the settling method.

> **Self-protective function:**

- 1) Overrun temperature protection;
- 2) Short circuit hint;
- 3) TCD filament protection;
- 4) FID flameout hint;
- 5) PFD exposed-light protection;
- 6) Keyboard locking with password; etc., ensuring normal running.

> **Simple operation, powerful**

automation:

- 1) All parameters can be entered through keyboard with prompt function;
- 2) 4 sets of complete chromatography analysis methods can be stored and recalled automatically;
- 3) An autosampler can be connected;
- 4) Parameters can be modified instantly while the GC is running;
- 5) Chromatography analysis method can be activated for 99 times repeatedly at the same time. It's especially suitable for unattended operation.

> **More choices of injectors:**

- 1) On- Column Injector for Packed Column;
- 2) Flash Vaporization Injector for Packed column
- 3) Automatic or manual gas inject valve;
- 4) Headspace sampler;
- 5) Thermal desorption system
- 6) Split/Splitless Capillary Injector; Three Injectors or two Split/Splitless Capillary Injectors can be fixed on GC.

> **More choices of detectors:**

- 1) TCD; 2) FID; 3) ECD; 4) FPD; 5) TSD
- Maximum of two TCDs or three different kinds of detectors can be installed.

> **Reactor:**

- 1) Internal; 2) external

> **Time programming of detectors:**

Each of detectors has 5-ramp programmable time control. Output-signal, attenuation range, and polarity can be set automatically.

> **Time programming of external events**

Providing 4 external events with 20-ramp programmable time control. The optional GC relays may be used to automate valves, operate split/splitless capillary injectors, drive auxiliary devices, or switch signals between detector A and detector B in a run.

- > **Many kind of special-purpose GC can be provided according to user's request.**

Chromatography Data handling software BF-2002

This powerful chromatography data handling software is simple, stable and user friendly. A Special optional versions are suitable for GPC, Gas Dissolved in Insulation Oil, TVOC, PONA analysis, Simulated Distillation for Crude Oil, Nicotine and Water in Tobacco analysis, and Amino Acids analysis.

Main features

- > Thanks to the patented high fidelity filtering Algorithm it could detect the weakest signal peak close to the baseline noise.
- > Via the patented integration method based on signals second derivatives, The BF-2002 can integrate all kinds of chromatogram well just through few easy-understanding parameters.
- > The multi-thread technique, BF-2002 can interact with user in the course of data acquisition and handling.
- > With split window technique, all elements are intelligently structured within one screen for easy access and operations.
- > With Multi-Document Interface technique, BF-2002 can work with more than one chromatogram at the same time. All the elements of analysis (e.g. the integrated chromatogram, the applied integration and quantifying methods, the calculated results, through to remarks) are centralized in one document in compliance with GLP

Hardware Specifications

- > 24 bit Analog/Digital conversion with more than 21 valid bit.
- > Input range $-1V - 1V$, and can be expanded to $-5V - 5V$.
- > Minimum resolution $1\mu V$.
- > Acquisition Speed 20Hz. Max of 60Hz is available upon request before delivery.
- > Integration Sensitivity $0.05\mu V*s$.
- > Linearity 0.005% of full scale.
- > Consistency 0.005%.
- > Connect to computer COM port and/or USB port. Connecting to LAN port is available upon request.
- > Two insulated channels for two signals of one instrument or for two different instruments.
- > Equipped with a remote start button, which can be reconnected to the start cable of injection valve or the start out signal of auto-sampler.

Specifications:
Column oven:

Operating temperature range:	ambient temperature to 400°C;
Dual opening-door:	at the back of column oven;
Cooling time:	250°C to 50°C in 5 min;
Programmable oven:	with 4-ramp temperature control;
Temperature programming rate:	0.1 ~ 50°C/min

Injector system:

Operating temperature range:	ambient temperature to 400°C
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Thermal conductivity detector -TCD:

Maximum temperature:	400°C
Sensitivity:	10000mV mL/mg (for butane)
Linear range:	10 ⁵
Current range:	50 to 400mA

Filament protection:

If He or H₂ carrier gas flow in the detector cell is cut off for 4 minutes, filament power will be shut off automatically.

Flame ionization detector-FID:

Maximum temperature:	400°C
Minimum detectivity:	5 × 10 ⁻¹² g/s (n-C16)
Linear range:	10 ⁷
Flameout hint:	monitoring the status of GC continuously after being turned on

Electron capture detector-ECD:

Maximum temperature:	400°C
Minimum detectivity:	0.1 pg/mL (γ-666)
Linear range:	10 ⁴
Emission source:	11 mC ⁶³ Ni

Flame photometric detector-FPD:

Maximum temperature:	400°C
Minimum detectivity:	[P] 2 × 10 ⁻¹² g/s (tributyl phosphate) [S] 2 × 10 ⁻¹⁰ g/s (p-methylsulfurphosoharous)
Linear range:	[P]: 10 ⁵ [S]: 10 ³
Two air-hydrogen flames:	For large volume injection or trace sample injection analyses;
Single air-hydrogen flame:	Sulfur sensitivity can be increased;
Direct output:	for phosphorus or sulfur analyses;
Square-root output:	for sulfur analyses;
Exposed-light protection:	When exposed-light current is more than 12μA, high voltage will be cut off automatically.

Nitrogen-phosphorus detector-TSD:

Maximum temperature:	400°C
Minimum detectivity:	[N] 2 × 10 ⁻¹³ g/s (azobenzene) [P] 1 × 10 ⁻¹³ g/s (malathion)
Linear range:	[N]: 10 ⁵ [P]: 10 ⁴

Article No.	System	Standard Configuration
0.252.001	GC-01	Base + FID + Packed Inj.
0.252.002	GC-02	Base + TCD+ double Packed Inj.
0.252.003	GC-03	Base + TCD + FID + double Packed Inj.
0.252.004	GC-04	Base + TCD + FID + Packed Inj. + capillary Inj.
0.252.005	GC-05	Base + FID + capillary Inj.
0.252.006	GC-06	Base + FID + ECD + double packed Inj.
0.252.007	GC-07	Base + FID + ECD + packed Inj. + capillary Inj.
0.252.008	GC-08	Base + FID + TCD + ECD + FPD + double packed Inj.
0.252.009	GC-09	Base + FID + TCD + ECD + FPD + packed Inj. + capillary Inj.
0.252.010	GC-10	Base + double FID + double packed Inj.
0.252.011	GC-11	Base+ double FID+ packed Inj. + capillary Inj.
0.252.012	GC-12	Base + FID + packed Inj. + capillary Inj.
0.252.013	GC-13	Base + FID + FPD+ packed Inj. + capillary Inj.
0.252.014	GC-14	Base + FID + FPD + double packed Inj.
0.252.015	GC-15	Base + FID + TSD + double packed Inj.
0.252.016	G-16	Base + FID + TSD + packed Inj. + capillary Inj.
0.252.017	GC-17	Base + FID + TSD + ECD + double packed Inj.
0.252.018	GC-18	Base + FID + TSD + ECD + packed Inj. + capillary Inj.
0.252.019	GC-19	Base + FID + ECD + FPD + double packed Inj.
0.252.020	GC-20	Base + FID + ECD + FPD + packed Inj. + capillary Inj.
0.252.021	GC-21C	Base + double FID + double capillary Inj.

Article No.	Model	
0.252.040	SP-3420A	Base / Main unit
Detectors		
0.252.041	TCD	TCD detector
0.252.042	FID	FID detector
0.252.043	ECD	ECD detector
0.252.044	FPD	FPD detector
0.252.045	TSD	TSD detector
Injectors		
0.252.046	1040s	Single packed column injector
0.252.047	1040d	Double packed column injector
0.252.048	1075	Capillary column injector (split/splitless)
	1075d	Double Capillary column injector
Work station		
0.252.049	BF-2002	Chromatograph work station (software & data acquisition board)
0.252.050	BF-2003	Double-channel chromatograph work station software with data collection board
Sampler		
0.252.051	F-502	Head space sampler
0.252.052	SAMP-01	Auto Sampler
0.252.053	SAMP-02	Auto-Sampler
UPS		
0.100.043	UPS-01	UPS (3 kV) Uninterruptable Power Supply
0.100.043	UPS-02	UPS (5 kV) Uninterruptable Power Supply



Order Informations

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