

PRECISION IN EVERY DETAIL

GI-3000

Liquid chromatography system

Organise the chromatography workflow around the method and configuration.



**4 configuration
types**

Gradient and isocratic

45 MPa

Maximum operating pressure

190–700 nm

Wavelength range

From specialist instruments to complete laboratory solutions.

Product brochure · V0.0.7

01

PRODUCT ADVANTAGES

Sampling, detection and data processing work together.

Series introduction

GI-3000 is an automatic liquid-chromatography system developed by General Instruments. The source describes syringe-based metering with mobile phase passing through the needle and offers different gradient and isocratic configurations.

01

Reduced sample carryover

Syringe metering and mobile-phase-through-needle injection are used; the original literature emphasises low carryover.

02

Reduced wash-solvent use

Only the outside of the sampling needle requires cleaning, reducing wash-solvent use.

03

Easy injection-volume adjustment

Injection volume can be changed on the computer without replacing a fixed-volume loop.

04

Method and compliance requirements

Designed around convenient operation, precision and needs associated with GLP, GMP and FDA requirements. Confirm actual suitability against laboratory procedures and configuration.

- Food
- Agriculture
- Environmental protection
- Inspection and quarantine
- Pharmaceuticals
- Testing organisations
- Scientific research
- Petrochemicals
- Teaching and training

02

SYSTEM CONFIGURATION

GI-3000-12 · Binary high-pressure-gradient liquid chromatography system



Instrument image from the original brochure

Intended users

The original literature lists food, agriculture, environmental protection, inspection and quarantine, pharmaceuticals, testing organisations, research, petrochemicals, teaching and training.

Module model	Configuration
GI-3000-P02	1 binary high-pressure-gradient pump unit, containing 2 constant-flow pumps and 1 gradient mixer
GI-3000-A01	1 autosampler
GI-3000-D01	1 UV detector
GI-3000-T01	1 column oven
GI-3000	1 system-software package
C18 4.6×250	1 chromatography column

03

SYSTEM CONFIGURATION

GI-3000-14 · Quaternary low-pressure-gradient liquid chromatography system



Instrument image from the original brochure

Intended users

The original literature lists food, agriculture, environmental protection, inspection and quarantine, pharmaceuticals, testing organisations, research, petrochemicals, teaching and training.

Module model	Configuration
GI-3000-P04	1 quaternary low-pressure-gradient pump
GI-3000-G04	1 four-channel online degasser
GI-3000-A01	1 autosampler
GI-3000-D01	1 UV detector
GI-3000-T01	1 column oven
GI-3000	1 system-software package
C18 4.6×250	1 chromatography column

04

SYSTEM CONFIGURATION

GI-3000-02 · High-pressure-gradient liquid chromatograph



Module model	Configuration
GI-3000-P02	1 high-pressure-gradient pump
GI-3000-D01	1 UV detector
GI-3000-T01	1 column oven
GI-3000	1 system-software package
C18 4.6×250	1 chromatography column
Rheodyne 7725	1 manual injector

Instrument image from the original brochure

Intended users

The original literature lists food, agriculture, environmental protection, inspection and quarantine, pharmaceuticals, testing organisations, research, petrochemicals, teaching and training.

05

SYSTEM CONFIGURATION

GI-3000-01 · High-pressure isocratic liquid chromatograph



Module model	Configuration
GI-3000-P01	1 high-pressure isocratic pump
GI-3000-D01	1 UV detector
GI-3000	1 system-software package
C18 4.6×250	1 chromatography column
Rheodyne 7725	1 manual injector

Instrument image from the original brochure

Intended users

The original literature lists feed, environmental protection and RoHS 2.0 testing.

06

SYSTEM SPECIFICATIONS

Verify technical specifications by whole-system configuration.

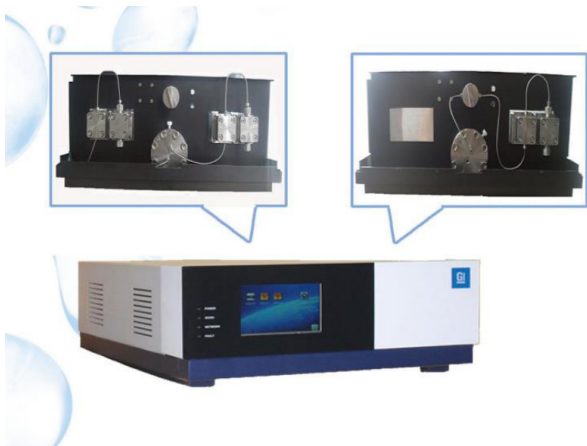
Item	GI-3000-12 / GI-3000-14
Flow range	0.001–9.999 ml/min
Maximum operating pressure	45 MPa
Pressure fluctuation	$\leq \pm 0.02$ MPa
Wavelength range	190–700 nm
Baseline noise	$\leq \pm 1 \times 10^{-5}$ AU, peak-to-peak
Baseline drift	$\leq \pm 3 \times 10^{-4}$ AU/h
Noise / drift conditions	Methanol; 1 ml/min; 254 nm; 20°C
Minimum detectable quantity	$\leq 2 \times 10^{-9}$ g/ml, naphthalene in methanol
Wavelength indication error	$\leq \pm 1$ nm
Whole-system repeatability RSD6, qualitative	$\leq 0.05\%$
Whole-system repeatability RSD6, quantitative	$\leq 0.2\%$
Gradient error	$\leq 0.5\%$
Temperature range	5–80°C
Temperature-control precision	$\leq 0.1^\circ\text{C}$
Sample-tray capacity	144
Sample carryover	$\leq 0.005\%$

For GI-3000-02 / GI-3000-01, source Page 4 specifies qualitative repeatability RSD6 $\leq 0.2\%$ and quantitative repeatability $\leq 0.2\%$. Its gradient error $\leq 0.5\%$, temperature range 5–80°C and temperature-control precision $\leq 0.1^\circ\text{C}$ apply only to gradient systems; other listed specifications correspond to this table.

07

COMPONENT DETAILS

Pumps and sampling, down to the individual unit.



Unit-component image from the original brochure



Unit-component image from the original brochure

Pump and solvent-delivery unit

Item	Specification
Flow range	0.001–9.999 ml/min
Flow accuracy	<±1%
Maximum operating pressure	45 MPa
Pressure pulsation	<±0.02 MPa

Autosampler

Item	Specification
Sample capacity	Maximum 2 ml × 144
Injection volume	0–100 µl, adjustable at any time
Sample carryover	<0.005%
Maximum pressure	45 MPa
Temperature-control range	5–80°C
Temperature-control precision	±0.1°C

Component specifications are retained separately from source Page 5 and do not replace performance specifications for different whole-system configurations.

08

COMPONENT DETAILS

Check the detector and column oven by module.



Unit-component image from the original brochure

Detector

Item	Specification
Wavelength range	190–700 nm
Baseline noise	≤±1.0×10 ⁻⁵ AU, peak-to-peak
Baseline drift	≤±3.0×10 ⁻⁴ AU/h
Noise / drift conditions	Methanol; 1 ml/min; 254 nm; 20°C
Minimum detectable quantity	1×10 ⁻⁹ g/ml, naphthalene in methanol
Wavelength indication error	≤±1 nm



Unit-component image from the original brochure

Column oven

Item	Specification
Temperature range	Room temperature +5–100°C
Temperature accuracy	±1°C
Temperature precision	±0.1°C
Temperature-setting resolution	0.1°C

Component specifications are retained separately from source Page 5 and do not replace performance specifications for different whole-system configurations.

09

CHROMATOGRAPHY SOFTWARE

From instrument methods to analysis and reporting.

GI-LC3000

The software provides instrument methods, analysis methods, report methods and eWorkflow functions to simplify complex sample analysis and data processing.



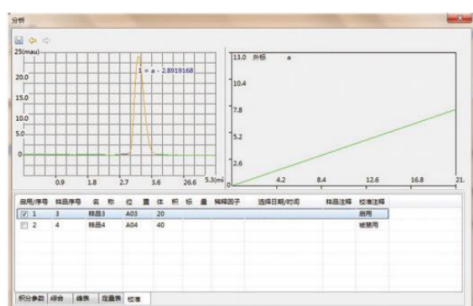
Operating interface

An intuitive interface guides instrument operation.



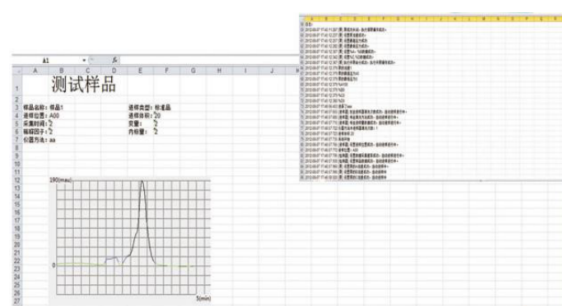
Instrument method

A setup wizard creates instrument methods and configures the GI-LC3000 operating programme.



Analysis method

Comprehensive analysis methods support complete analytical data and results.



Report method

Multiple report formats accommodate different content structures.



Unattended operation

Intelligent startup and shutdown support 24-hour automatic instrument operation.



Database management

Database management organises analytical data and product-development workflows.

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APPLICATIONS & SOURCE REFERENCES

Industry applications, chromatograms and customer identifiers.

01

Pharmaceutical applications

Conventional chemical drugs, vitamins, antibiotics, traditional Chinese and natural medicines, biological products, amino acids, protein and nucleic-acid research, and production quality control.

02

Food testing

Food additives, pesticide and veterinary-drug residues. The source includes chromatograms for aflatoxins, saccharin in milk powder, melamine in dairy products and other analyses.

03

Other applications

Environmental protection, agriculture, inspection and quarantine, university laboratories and testing organisations.

04

Chromatograms and identifiers

The following page retains chromatograms and customer identifiers from the source without expanding them into undocumented project stories.

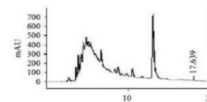
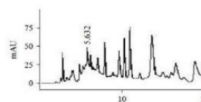
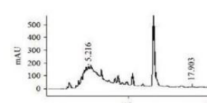
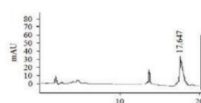
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APPLICATION FIGURES

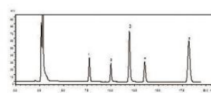
Application chromatograms and identifiers from the source.

应用范围

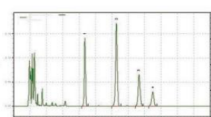
制药 常规化学药，维生素，抗生素，中药和天然药物，生物制品，氨基酸，蛋白质核
酸研发，生产质量控制。



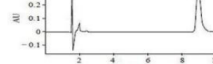
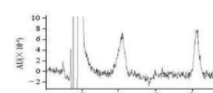
食品 食品添加剂，农药残留，兽药残留检测



黄曲霉毒素谱图



奶粉中糖精钠等检测谱图



奶及乳制品中三聚氰胺的

环保 农业 检验检疫 大学实验室 检测机构



Chromatograms, brand marks and organisation identifiers are taken from the original brochure. Refer to the source for application conditions and relationships.

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QUALIFICATIONS & MANUFACTURER

Manufacturer development and credentials.

Manufacturer introduction

The original literature describes General Instruments (Shenzhen) Co., Ltd. as a liquid-chromatograph manufacturer and supplier drawing on US technology, with an experienced team of doctoral and master's graduates and senior engineers. It describes development of GI-3000 systems, customer acceptance, a worldwide sales network and the designation 'chromatography specialist'.



Certificates retain the original holder, model and date. Verify status and scope against the originals.