BioLAB

PRODUCT CATALOG

# CHROMATOGRAPHY BHC1C1 (BCHR-110)

CE ISO9001 CERTIFIED

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# CHROMATOGRAPHY BHC1C1

## GAS CHROMATOGRAPHY-MASS SPECTROMETRY

Chromatography is a technique that enables the separation, identification, and purification of the components of a mixture for qualitative and quantitative analysis. Our extensive range offers a variety of products like Gas, Ion and Portable Ion chromatography products to meet all separation needs, including improved resolution, enhanced sensitivity, faster analysis and consistent performance.

Hardware:
Electronic pressure/flow control system (EPC/EFC) for self-developed systems.
The patented EI filament set provides highly efficient electron emission, a maximum of 350μA.
Quality mass analyzer with pre-filter reduces quadrupole pollution.
High-energy dynode electron multiplier ensures good sensitivity.
A vacuum system with quality mechanical and turbo molecular pumps guarantees stability and reliability.
Full scale gauges monitor vacuum states in real time.
The self protection system guarantees safety of operators and core parts under abnormal conditions.
RF power supply digital compensation technology ensures better sensitivity and r

## SPECIFICATIONS

| Model | BHC1C1 |
|---|---|
| Old Model | BCHR-110 |
| GC Specification | |
| - Inlet | Split / Splitless |
| - Inlet Temperature | Highest temperature 450°C |
| - Electronic Pressure Control (EPC) Range | 0-50 Psi, accuracy 0.1 Psi, support constant |
| - Maximum Diffusent Ratio | 500:1 |
| - Working Temperature in Column Oven | +10°C - 450°C |
| - Maximum Heating Rate | 40°C/min |
| - Platform Warming | 8 stages 9 platforms program warming |
| - Sample Size | 0.1-10 μL |
| - Peak Area Repeatability | < 1% RSD |
| - Retention Time | < 0.5% RSD |
| - Sweeping Gas Volume | 2-10 ml/min |
| MS Specification | |
| - Ionization Energy (Electron Impact) | 10 eV - 100 eV (normally 70 eV) |
| - Mass Range | 1.5 - 1000 amu |
| - Resolution | 0.7 amu (half peak width) |
| - Ion Source Temperature | 100 - 350°C |
| - Maximum Service Temperature at Interface | 400°C |
| - Mass Axis Stability | ±0.10 amu/48 hrs |
| - Sensitivity | Full scan, 1 pg OFN at m/z 272 with S/N ≥30:1 (RMS) |
| - Scanning Rate | Max. 10000 amu/s |
| - Accuracy | 0.1 amu |
| - Vacuum System | High-performance mechanical backing pump (5 $m^3/h$) and turbo molecular pump (67 l/s), sufficient vacuum ≤ $8x10^{-5}$ mbar |
| - Detector | High energy dynode electron multiplier |
| - Scanning Methods | SIM, FULL SCAN, MIX |
| Others | |

| | |
|---|---|
| - Pressure | 220 V (±5%), 50 Hz (±1) |
| - Ambient Temperature | 18°C-30°C |
| - Relative Humidity | <70% |
| Alt Name | Gas Chromatography-Mass Spectrometry |

## FEATURES

Hardware:
Electronic pressure/flow control system (EPC/EFC) for self-developed systems.
The patented EI filament set provides highly efficient electron emission, a maximum of 350μA.
Quality mass analyzer with pre-filter reduces quadrupole pollution.
High-energy dynode electron multiplier ensures good sensitivity.
A vacuum system with quality mechanical and turbo molecular pumps guarantees stability and reliability.
Full scale gauges monitor vacuum states in real time.
The self protection system guarantees safety of operators and core parts under abnormal conditions.
RF power supply digital compensation technology ensures better sensitivity and resolution in full mass range.
Software:
The software controls an auto sampler, gas chromatograph and mass spectrometer; data are acquired and transferred by high-speed network card.
Full Scan and selective Ion Monitoring modes are available, the system supports manual and automatic tuning, display of total ion current and mass chromatogram.
The data processing section searches target compounds based on mass spectra of samples, displays search results which include retention times, structural formula and standard mass spectra, and compares the abundances of standard and real target ions. Users can make accurate qualitative and quantitative analyses.
Superior quality: It uses high-end core parts, which ensures high quality.
Meeting high demands: It provides necessity parts and meets multiple requirements from clients in different fields.
User-friendly design: It facilitates easy operation and convenient maintenance.
High-efficiency ionization source: Modularization design, employing ion source, having high ionization efficiency, and enhancing sensitivity.
Software: Convenient operation, data acquisition and processing.
Highly cost-effective: Offering more benefits while meeting all application demands.
Consumables with favourable price: Most consumables and parts are self-developed, which save a lot of maintenance cost, while providing high performance.

## APPLICATIONS

Food Testing, Chemical Industry, Beverage Testing, Drug testing, Forensic Science, Pharmaceutical, Molecular Biology, Medical, Research, Laboratory.

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