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A01- GC9800 Gas Chromatography



Descriptions

GC9800 series gas chromatography is a kind of practical analytical instrument with high performance, which allows assembly of highly sensitive thermal conductivity detector (TCD) or highly stable hydrogen flame ionization detector (FID). According to the user's needs, different detectors such as MTCD, ECD, and so on, can also be installed in this instrument. The design and fabrication of this instrument are based on the principle of gas chromatography. It has reasonable structure, high sensitivity, and it is easy for operation and maintenance.

When operating GC9800, a certain kind of carrier gas (H_2 , N_2 , or Ar, which is called mobile phase) is needed. And the stationary phase is filled in the chromatographic column. The compositions of analyzed mixture are separated by multiple distributions between two phases or because of the difference of bulk additive adsorbability they can be separated to different compositions. The single composition after chromatographic fractionation enter detector along with the carrier gas one after another. Then the corresponding electric signals will appear in the detector and be recorded with chromatographic data processor or chromatographic working station. Thus qualitative or quantitative analysis can be carried to each composition in mixture.

The instrument can be equipped with different sampling devices and it can be used to analyze gas, liquid and solid samples. In addition, GC9800 can make macro-analysis and micro-analysis for various gases and organic mixtures whose boiling point is below $350^\circ C$. GC9800 is an indispensable analytical instrument in the fields of petroleum, chemical industry, spice, medicine, hygiene, metallurgy, electric power, gas industry and many specific domains.



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Features & Specifications

Different Models of GC9800:

- **GC9800TP**
TCD, double packed column injectors, microcomputer temperature control, three-stage temperature programming, automatic back door open system
- **GC9800FP**
FID, packed column and capillary column injector, microcomputer temperature control, three-stage temperature programming, automatic back door open system
- **GC9800FFP**
Double FID (double amplifiers), packed column and capillary column injector, microcomputer temperature control, three-stage temperature programming, automatic back door open system
- **GC9800TFP**
TCD+FID, packed column and capillary column injector, microcomputer temperature control, three-stage temperature programming, automatic back door open system
- **GC9800EP**
ECD, packed column and capillary column injector, microcomputer temperature control, three-stage temperature programming, automatic back door open system
- **GC9800FEP**
FID+ECD, packed column and capillary column injector, microcomputer temperature control, three-stage temperature programming, automatic back door open system

GC9800 Technique Parameter:

Operation Conditions

- Environment temperature: 5-35 °C
- Relative humidity: ≤ 85%
- Working environment: The room must be free from corrosive gas and hydrogen gas cylinder must be kept away from the fire. There must be no turbulent shock and strong magnetic field, which will affect the operation.
- Power supply: 200V ± (5%-10%), frequency: 50Hz ± 0.5Hz

Temperature Control

350°C ± 0.1°C; the temperature programming velocity is 0.1-25°C/min

Susceptiveness of Detector

- TCD (TC-1): $S \geq 2800 \text{mv.ml/mg}$ (benzene)
- FID: $D \leq 1 \times 10^{-11} \text{g/s}$ (nC16)
- ECD: $D \leq 1 \times 10^{-13} \text{g/s}$ (γ -666)

Stability

Baseline Shift ≤ 30μv/15min, Noise ≤ 10μv