



Element Content Composition

CHN element Analyzer Carbon hydrogen nitrogen



Instrument introduction

Our CHN analyzer is a precision analytical instrument built according to the needs of users by many years of technical accumulation. It has the characteristics of wide linear range, low detection limit, fast analysis speed, stable performance and simple operation, and can accurately determine the content of carbon, hydrogen and nitrogen in coal.

Our CHN analyzer adopts a horizontal structure according to the customer's existing laboratory conditions. The instrument can be placed on the experimental table for experiments, which is convenient for customers to add samples and test.

Scope of application

Suitable for power plant, coal mine, commodity inspection, environmental protection, geological prospecting, metallurgy, paper making, chemical industry, scientific research, education and other departments to determine the content of carbon, hydrogen, nitrogen elements in coal, coke and other solid substances.

Note :

Due to keeping innovation, the specification and Machine pictures or color are subject to alteration without notice!



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Technical Characteristic

- One-time lofting 39, disposable lofting 78 samples can be purchased. The instrument can automatically send samples, perform cycle testing, and complete the whole process without manual operation. The analysis process can be added or replaced at any time.
- Horizontal structure, the instrument can be placed on the laboratory table, convenient for customer operation.
- Uses advanced PID algorithm for temperature control : furnace temperature control accuracy up to $\pm 1^{\circ}\text{C}$, constant greenhouse and gas storage tank temperature control accuracy up to $\pm 0.1^{\circ}\text{C}$.
- Equipped with absolute pressure sensor to monitor the pressure of the whole gas path. It can automatically detect air tightness of the gas path, furnace, infrared pool, thermal conductivity pool, and gas storage tank.
- Uses infrared spectrum absorption method to determine carbon and hydrogen content; thermal conductivity method to determine nitrogen content.
- Fast test speed and high automation. Testing time for carbon, hydrogen, and nitrogen is about 4 minutes.
- Option for "automatic cooling after experiment completion." After the experiment, the computer automatically shuts down and the instrument cools down, allowing unattended operation without manual shutdown.
- Experimental report can be customized according to customer requirements to reduce workload.
- Can access the laboratory management system for balance data integration, test result backup, and upload

Technical Parameter

Measurement Range	Carbon: 0.005% ~ 100% Hydrogen: 0.01% ~ 60% Nitrogen: 0.008% ~ 60%
Repeatability	Carbon (Cad $\leq 0.5\%$) Hydrogen (Had $\leq 0.15\%$) Nitrogen (Nad $\leq 0.08\%$)
Temperature Control Range.....	RT + 10 ~ 1050 $^{\circ}\text{C}$
Temperature Control Accuracy	$\pm 1^{\circ}\text{C}$
Sample Quality	80 ~ 100 mg
Sample Delivery Mode	Automatic sample delivery, automatic sample drop
Number of Samples	39 per batch Test process can add/replace samples One-time lofting up to 78 samples
Single Sample Analysis Time	± 4 minutes
Carrier Gas.....	Helium, purity $\geq 99.995\%$, pressure 0.25 ± 0.1 MPa
Auxiliary Gas	Oxygen purity $\geq 99.5\%$ (for hydrocarbon measurement), Nitrogen purity $\geq 99.995\%$, pressure 0.25 ± 0.1 MPa
Power Gas	Inert gas, no oil & no water, pressure 0.29 ± 0.1 MPa
Power Consumption	≤ 4.5 kW
Placement	Horizontal (can be placed on test table)

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