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Analysis & Testing Instruments



Differential Pressure Method Gas Transmission Tester N530 2.0

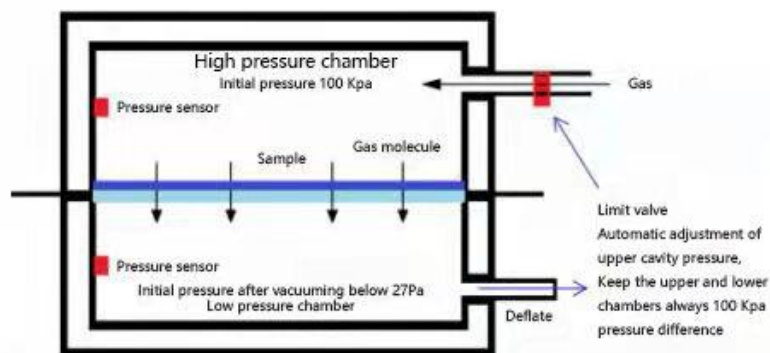


Introduction

N530 2.0 is based on the test principle of differential pressure method, It's designed with reference to GB/T 1038, ISO 2556 and other standards. Adopt high-precision pressure sensor and automatic pressure difference keeping technology, high test accuracy. It is suitable for the gas permeability test of films, sheets, papers, packages and related materials in the fields of food, medicine, medical equipment, daily chemicals, photovoltaic electronics, etc. It provides a wide range and high-efficiency gas transmission rate test of high, medium and low gas barrier materials.

Test Principle

According to the principle of differential pressure method. Place the processed sample between the upper and lower chambers, use a vacuum pump to evacuate the entire gas circuit system, and then add an experimental gas of an atmospheric pressure to the upper chamber to form a constant pressure difference between the upper and lower chambers. Under the pressure gradient, the gas permeates from the upper chamber to the lower chamber through the membrane, then the system can calculate the barrier performance parameters such as the gas permeability of the sample through the pressure change of the lower chamber.



Working principle

Standards

ISO 2556, ISO 15105-1, ASTM D1434, JIS K7126-1, YBB 00082003, GB/T 1038

Specifications

Item	Technical parameter
Test range	0.01~50000 cm ³ /(m ² ·24 h·0.1 MPa), It can be expanded the upper limit of the volume to test maximum 600000 cm ³ /(m ² ·24h·0.1MPa)
Test accuracy	0.001 cm ³ /(m ² ·24 h·0.1 MPa)
Temperature control range	15~60°C
Temperature control accuracy	±0.1°C
Vacuum accuracy	Indication ± 0.2% (1%-100% of sensor specification)
Vacuum	< 10 Pa
Vacuum resolution	0.01 Pa
Test pressure	0.1 MPa
Test gas	O ₂ 、CO ₂ 、N ₂ , etc.
Permeation area	50.24 cm ²
Sample size	Φ110 mm
Sample thickness	≤2 mm
Available test quantities	1~3pcs
Equipment dimension	690 mm*620 mm*390 mm
Power	750 W
Voltage	AC 220V, 50Hz

Features

◆ **Patented core technology for efficient and accurate testing**

Patented automatic pressure differential technology, which automatically maintains the pressure difference between the two sides of the sample (the pressure differential can be adjusted freely), good stability and low failure rate due to a built-in high-precision pressure sensor with a resolution of 0.01 Pa.

The semi-conductor refrigeration sheet can control the temperature bidirectionally and automatically, the control accuracy reach to 0.1°C.

Original imported vacuum pump with high vacuum efficiency and low noise, the ultimate pressure can reach 0.1 Pa.

The new pneumatic air circuit control system, Excellent sealing performance that sample can be locked by one-button style automatic fixture.

◆ **High throughput, wide testing range and high applicability**

The instrument is equipped with 3 chambers, which supports simultaneous testing of three identical or different samples, independent operation, independent data, and high test efficiency.

The testing minimum reach to 0.01 cm³/(m²·24 h·0.1 MPa), which can meet the test requirements of high, medium and low barrier materials.

With the optional addition accessories, it can measure the gas transmission rate of bottles, bags, bowls and other packages. At the same time, it supports the permeability test of different gases such as oxygen, carbon dioxide, nitrogen, and air.

◆ **Good looking, convenient operation, real-time visualization of curves**

The product is designed from the perspective of ergonomics and technical aesthetics, with an exquisite 3D printed cover.

One-button test, fully automatic operation including judgment, shutdown.

Real-time display of five curves: permeation-time, temperature-time, upper chamber pressure-time, lower chamber pressure-time, pressure difference-time, curves support preview and hide function.

◆ **Intelligent operating system**

Self-developed intelligent operating system, easy-understanding modular graphics, flexible setting of test process parameters.




Designed according to the GMP appendix "Computerized System", it has an audit trail function and multi-level permissions settings for users, which can meet the needs of the pharmaceutical industry for data traceability.





Personalized test reports can be set on demand, Supported to output the data forms in multiple formats. Electronic signatures, and online submission of audit reports are supported.

◆ **Professional calibration service with accurate and reliable data**

Our company has the "National Standard Substance Grading Certificate" for gas transmission rate approved and issued by the "General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China", the standard substance number (GBW(E) 130541 / GBW(E) 130542); The national standard material is used to calibrate and test the instrument to ensure the accuracy, versatility and authority of the test data.

Application

	<p>Films</p>	<p>Various plastic films (PP/PET/PE/PVC/BOPP/ CPP, etc.), plastic composite films, paper-plastic composite films, metal composite films, co-extruded films, aluminized films, degradable packaging films (PLA/PBAT/PBS etc.) and other membranous materials</p>
	<p>Sheet</p>	<p>Solid medical hard sheet (PP/PVC/PTP, etc.), metal composite sheet, rubber sheet and other sheet materials</p>
	<p>Paper and cardboard</p>	<p>Coated paper, carbon paper, silicone paper, aluminized paper, paper-aluminum-plastic composite sheet and other paper, cardboard</p>

	Medicinal patch, warmer patch	Medical plaster treatment patch, warm patch, dysmenorrhea patch, etc.
	Hygiene	Sanitary napkins, pads and other hygiene products
	Package	Wine bottles, Coke bottles, peanut oil drums, Tetra Pak packaging, vacuum packaging bags, three-piece cans, cosmetic packaging, toothpaste tubes, jelly cups, yogurt cups, etc. Plastic, rubber, paper, paper-plastic composite, glass, metal bottles Gas transmission rate test of bags, cans, boxes and drums
	Gases	Oxygen, carbon dioxide, nitrogen, air, helium, etc.

Factory configuration

Standard configuration	Power line, communication line, special wrench, sampler, rubber hose, air pipe joint 1/8; air pipe joint 1/4, sealing grease, qualitative filter paper, Phillips screwdriver, standard membrane, threaded joint, sealing ring, mouse
Charged Optional	Computer, measurement certificate, air compressor, vacuum pump
User-supplied	<ol style="list-style-type: none"> 1. Laboratory requirements: general laboratory; 2. Power requirements: one 220V three-hole three-position switch socket, 10A; 3. Computer requirements: standard configuration (Windows10, with a nine-pin serial port.); 4. Requirements for experimenters: 1-3 test operators, certain computer knowledge;

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| | <p>5. Drying dish (all samples need to be dehydrated and degassed for 24 hours);</p> <p>6. Other accessories: used for calibration: a bottle of oxygen (above 99.999% purity), and other gases at your own discretion.</p> |
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Note: Guangzhou Biaoji has always been committed to the innovation and improvement of product performance and function. For this reason, product technical specifications and appearance will also be changed accordingly. The above situation will not be notified. The company reserves the right of modification and final interpretation.



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Service Commitment

- ◆ Free packaging inspection technical support.
- ◆ One-year warranty for instrument, free software upgrade service, and lifetime free technical support.
- ◆ Free to the factory to train the operation of the instrument, qualified people issued graduation certificates, free accommodation and food.
- ◆ Instrument “trade-in” policy and provision of backup instruments in case of failure.
- ◆ There is a testing center (CNAS L8185) to provide incoming sample testing and sample data comparison services.
- ◆ Set up a Reference Standards Development Center to provide calibration services.

Company Introduction

Guangzhou Biaoji Packaging Equipment Co., Ltd. was established in 2002 and located in Guangzhou Economic Development Zone. It is a company integrating R&D, production and sales of packaging testing instruments, packaging equipment, modified atmosphere preservation equipment and other products, as well as providing third-party testing and standard material proficiency testing. It is committed to providing comprehensive, professional and high-quality products and technical services for packaging, food, medicine, testing and other industries.

Write industry standards with quality, and become the leader and leader in the field of global packaging testing. The 80,000-mile journey is sailing, and Guangzhou Biaoji will escort you!



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