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Analysis & Testing Instruments



AUTO Y36/1 Oxygen Permeability Analyzer -Coulometric Sensor Method

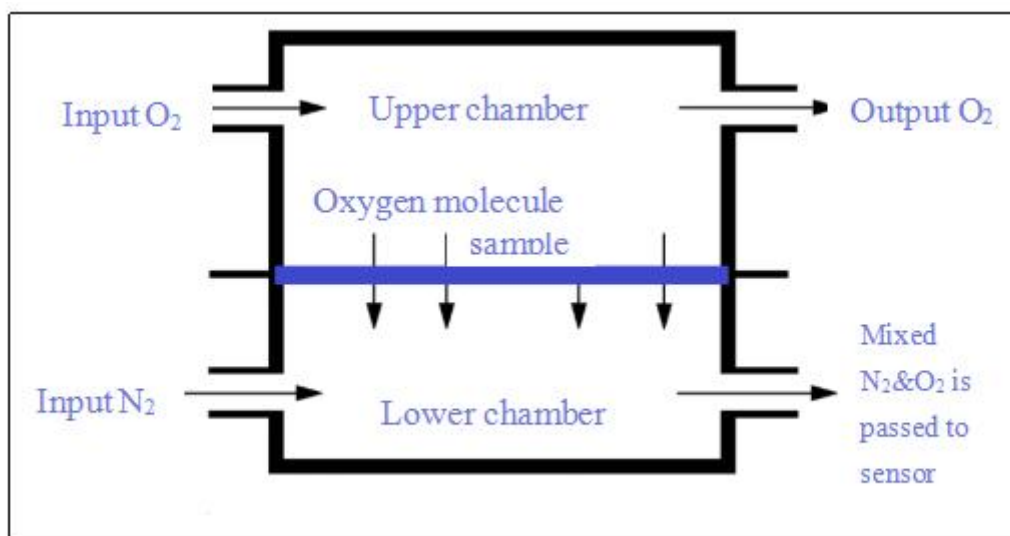


Product introduction

This product is based on the testing principle of the Coulometric Sensor Method testing Oxygen, and is designed and manufactured with reference to ASTM D3985, GB/T 19789 and other standards. Adopting high-precision imported oxygen sensor, high test accuracy, it is suitable for oxygen transmission performance testing of films, sheets, paper, packaging and related materials in the fields of food, medicine, medical equipment, daily chemicals, photovoltaic electronics, etc., and provides a wide range and high-efficiency oxygen transmission rate detection for high, medium and low oxygen barrier materials.

Test principle

AUTO Y36/1 Oxygen Permeability Analyzer adopts the principle of Coulometric Sensor Method. The pre-processed sample is fixed in the middle of the test chamber, while high-purity oxygen flows in the upper chamber of the film, high-purity nitrogen (carrier gas) flows in the lower chamber, oxygen molecules diffuse through the film to the nitrogen on the other side, and the flowing nitrogen gas is carried to the sensor, and the oxygen transmission rate is calculated by analyzing the oxygen concentration measured by the sensor.



Schematic diagram of Coulometric Sensor Method

Standard

ASTM D3985, ASTM F2622, ASTM F1927, ASTM F1307, ISO 15105-2, DIN 53380-3, GB/T 19789, YBB 00082003, JIS K-7126-B

Specification

Item	Technical parameters
Test Range	0.05~1000 cm ³ /(m ² ·24h)
Resolution	0.0001 cm ³ /(m ² ·24h)
Temperature control range	15~45°C
Temperature control accuracy	±0.1°C
Humidity control range	Dryness=0%RH, 30~90%RH, 100%RH
Humidity control accuracy	±2% RH
Pass area	50.24 cm ²
Sample size	Φ110 mm
Sample thickness	≤3 mm
Sample quantity	6 pcs
Carrier gas pressure	≥0.1 MPa
Gas supply interface	Φ3 mm gas pipe
Interface size	1/8 inch
Pneumatic pressure	≥0.3 MPa
Dimension	460 mm×592 mm×628 mm
Power	1150 W
Power supply	AC 220 V, 50 Hz

Features

◆ Unique cavity design, innovative and convenient upgrade

The newly upgraded vertical drawer cavity design can be opened and closed with one click, making it easy to upgrade.

The new pneumatic air circuit control system and automatic clamps clamp the specimen, which is convenient and labor-saving and has excellent sealing performance.

◆ High-precision imported oxygen sensor

High-precision imported oxygen sensor with high sensitivity, ultra-high stability and ultra-low failure rate, with a resolution of $0.0001 \text{ cm}^3/(\text{m}^2 \cdot 24\text{h})$.

◆ Precision control of temperature and humidity

Temperature control: The semiconductor refrigeration chip automatically controls the temperature in both directions, with a temperature control accuracy of 0.1°C .

Humidity control: Dual air flow (dry air and wet air) humidity control method, stable humidity, high precision, and the humidity is accurate to $\pm 2\% \text{RH}$.

◆ Meet high-throughput, wide-range testing requirements

The instrument is equipped with 6 cavities with independent data, which can meet high-throughput testing needs and has high testing efficiency.

The measuring range is $0.05 \sim 1000 \text{ cm}^3/(\text{m}^2 \cdot 24 \text{ h} \cdot 0.1 \text{ MPa})$, meeting the testing needs of medium, medium and low barrier materials.

◆ Excellent appearance, convenient control, real-time curve visualization

The host is equipped with an 11.6-inch high-resolution color touch screen, which has clear views, sensitive touch control, and easy operation.

The instrument operates fully automatically, with one-button testing, automatic judgment and automatic shutdown.

Real-time display of six sets of curves: transmission volume-time, temperature-time, humidity-time, nitrogen flow-time, oxygen flow-time, and concentration-time. The curves support the preview and hiding function.

◆ Intelligent operating system, global certification

Intelligent operating system, modular diagram, flexible setting of test process parameters, intuitive and convenient operation.

Designed in accordance with the GMP Appendix "Computerized System", it has audit tracking functions and multi-level user permission settings, which can meet the pharmaceutical industry's needs for data traceability.

Personalized test reports can be set on demand, support data output in multiple formats, and

support electronic signature and online submission of audit reports.

- ◆ Professional calibration services, accurate and reliable data

Our company has the following certificates approved and issued by the "General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China": "National Standard Material Grading Certificate" for gas transmission rate and "License of the People's Republic of China for Manufacturing Measuring Instruments", with reference number (GBW(E) 130497 / GBW(E) 130498); use national reference materials to calibrate and verify the instrument to ensure the accuracy, versatility and authoritativeness of the test data.




- ◆ Laboratory intelligent IoT platform


The instrument can be connected to the Internet of Things platform to realize digital network management.

Remote authorized login to the IoT platform can realize functions such as managing experimental data, remote diagnosis and troubleshooting.

Customers can download the required instrument information, documents, and operation videos on the platform by themselves.

Application

	Film	Various plastic films (PP/PET/PE/PVC/BOPP/PP, etc.), plastic composite films, paper-plastic composite films, metal composite films, co-extruded films, aluminized films, degradable packaging films (PLA/PBAT/PBS, etc.) Oxygen transmission rate test of film materials
	Sheet	Oxygen transmission rate test of solid medical hard sheet (PP/PVC/PTP, etc.), metal composite sheet, rubber sheet and other sheet materials
	Medicinal patch, warm patch	Oxygen transmission performance test of medical plaster treatment patch, warm patch, dysmenorrhea patch, etc.

	<p>solar backplane</p>	<p>Oxygen transmission performance test of solar backsheet</p>
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Configuration

<p>Standard configuration</p>	<p>Power line, communication line, sample cutter, sealing grease, metal gas pipe, terminal ferrule joint, reference film, special wrench, syringe, sealing ring, fork wrench, Phillips screwdriver, mouse</p>
<p>Optional</p>	<p>Computer, Metrology certificate, air compressor</p>
<p>Prepared by user</p>	<ol style="list-style-type: none"> 1. Standard laboratory environment; 2. Power requirements: 220V regulated power supply with three holes and three sockets with a switch; 3. Computer requirements: standard configuration (Windows10, with 64-bit system); 4. One bottle of oxygen, the purity must be above 99.999%, with a pressure reducing valve, the output range is 0-0.4 Mpa; 5. One bottle of nitrogen, the purity must be above 99.999%, with a pressure reducing valve, the output range is 0-0.4 Mpa

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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- ◆ 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 GBPI will escort you!



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