W309 Water Vapor Transmission Rate Tester

The W309 is based on the Gravimetric method, both water method and desiccant method, and is applicable to the water vapor transmission rate test of plastic films, composite films, sheets and other materials used in packaging, medical and construction industry.

Technical Features

- Standard periodically weighing method and auto zero before each weighing guarantee the accuracy and uniformity of the testing data.
- Touch screen interface is more convenient to operate.
- Nine sample for each test, the weighing system is controlled by the electric cylinder which assured the reliability of the test data.
- Standard air velocity to prevent the humidity difference spread which ensures the accuracy of the test
- Wide range and high-precision of automatic temperature and humidity control to support various combinations of non-standard test conditions
- High-precise and automatic control system of temperature can be used under different conditions.
- Dual test modes: water method and desiccant method.
- Adjustable air velocity enables the appropriate humidity for testing.
- The data can be stored and outputted in multi-format (including reports in excel and cloud sharing).
- GMP management of user's three-level authority complies with international standards.
- The instrument processes statistical analysis of single and group data.
- Equipped with ISP control online and upgrade function.
- Specialized communicating software can display in real-time, analyze and store data.

Test Principle

Under a certain test temperature, a constant humidity difference is generated between two sides of the test specimen. The water vapor permeates through the specimen and into the dry side. By measuring the weight changes of the test dish in different time, water vapor transmission rate and other parameters can be obtained.

Test Standards

GB/T 1037、GB/T 16928、ISO 2528、ASTM E96、ASTM D1653、TAPPI T464、DIN 53122-1、JIS Z0208、YBB 00092003

Application

Basic Application	Film	Including plastic films, plastic composite films, paper-plastic composite films, geomembranes, coextruded films, aluminized films, aluminum foils, aluminum foil composite films, breathable water-proof films and many other film materials
	Sheeting	Including engineering plastics, rubber, waterproof building materials and thermal insulation materials, e.g. PP, PVC, PVDC and nylon
	Paper, Paperboard	Including paper and paper board
	Textile and Non-woven	Including textiles and nonwovens

Technical Date Sheet

Index	Parameter
Test Range	0.1 ~ 10,000 g/m²•24h（Standard）
Number of Specimen	1 ~ 9 pcs
Resolution	0.0001g
Temperature Range	10 °C ~ 55°C（Standard）
Temperature Accuracy	±0.1°C
Humidity Range	10%RH ~ 90%RH（Standard 90%RH, Relative humidity）
Humidity Accuracy	±1%RH
Air Velocity	0.5 ~ 2.5 m/s （Customization is available）
Test Area	33 cm²
Sample Thickness	≤ 3 mm （Customization is available）
Sample Size	Φ74 mm
Port Size	Φ6mm PU Tubing
Instrument Dimension	650 mm (L) × 600 mm (W) × 420 mm (H)
Power Supply	AC 220V 50Hz
Net Weight	50 kg

Configuration

Standard：Instrument, Test Dishes, Professional Software and Communication Cable, Moisture Filter, Round Sample Cutter, Quantitative Dropper, Gloves

Optional：Reference Film, Desiccant, Air Compressor

Notes:

1. The gas supply port of the instrument is Φ6 mm PU tubing;

2. Customers will need to prepare for gas supply and distilled water.

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