Water Vapor Transmission Rate Tester

WTC-203H

WTC-203H This product is based on the test principle of gravimetric water vapor transmission, and provides a wide range and high efficiency water vapor transmission rate detection test for low, medium and high water vapor barrier materials. It is suitable for the water vapor transmission performance test of films, sheets, paper, fabrics, non-woven fabrics and related materials in the fields of food, medicine, medical equipment, daily chemicals, etc.

Product Features

- Based on the test principle of the cup method, it is a professional water vapor transmission rate (WVTR) test system for thin film samples, which can detect the water vapor transmission rate as low as 0.1g/m2・24h
- The configured high-resolution load cell provides excellent system sensitivity on the premise of ensuring high precision
- A single test can test three samples at the same time, the lifting and weighing of the moisture permeable cup is controlled by a micro motor, and the data is accurate and reliable
- The moisture permeable cup can be tested independently, the test process does not interfere with each other, and the test results are displayed independently
- Standard purging air speed can effectively prevent the formation of humidity gradient above the moisture permeable cup and ensure the accuracy of the test
- Automatically reset the system before weighing to ensure the accuracy of each weighing, and support a wide range of power access
- The quick access temperature and humidity test socket is convenient for users to perform quick calibration

- Provide two quick calibration methods of standard film and standard weight to ensure the accuracy and versatility of test data
- Wide range, high precision, automatic temperature and humidity control, to meet the test under various test conditions
- Precise mechanical design not only ensures the ultra-high precision of the system, but also greatly improves the detection efficiency
- Multi-level user authority setting, test data integrity and other functions, meet GMP related test requirements (optional)
- Test results support multi-format storage and data output Support convenient historical data query, comparison, analysis and printing and other functions

Test principle

WTC-203H The water vapor transmission rate tester is based on the gravimetric test principle. Water or desiccant is placed in the pre-treated test cup, then the pre-treated sample is clamped on the test cup, and the test cup is placed in the test chamber. The test chamber generates a stable temperature, humidity and airflow purge environment based on specified test conditions. The water vapor enters the drying side through the sample, and the results such as the water vapor transmission rate of the sample are calculated by measuring the change of the overall weight of the test cup with time.

Reference Standards

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

Technical Parameters

Items	Parameters
Test range	0.1～10，000 g/ m2•24h
Test accuracy	0.01 g/ m2•24h
Resolution	0.0001g
Temperature range	15℃～65℃
Temperature accuracy	±0.1℃
Humidity range	90%RH～70%RH
Humidity accuracy	±1%RH
Standard wind speed	0.5～2.5 m/s customizable

Sample quantity	1～3 Independent
Sample diameter	Φ74mm
Test area	33 cm2
Sample Thickness	≤3 mm
Test Volume	30 L
Gas	Compressed air or N2
Connection tube	Φ6 mm PE
Dimention	660 mm (L) × 480 mm (W) × 525 mm (H)
Power	AC 220V 50Hz
N.W.	70Kg

Configuration

Standard： Host,professional software, moisture permeable cup, gas drying device, automatic drying filter, calibration weight, communication cable, sampler, gas supply valve fittings

Optional： Sampling blade, air compressor, desiccant, non-standard moisture permeable cup

Remarks: The gas source inlet of this machine is Φ6mm polyurethane tube, the test gas source is provided by the user, and the gas source and distilled water are provided by the user