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Analysis & Testing Instruments



W301 2.0 Gravimetric Method Water Vapor Permeability Analyzer



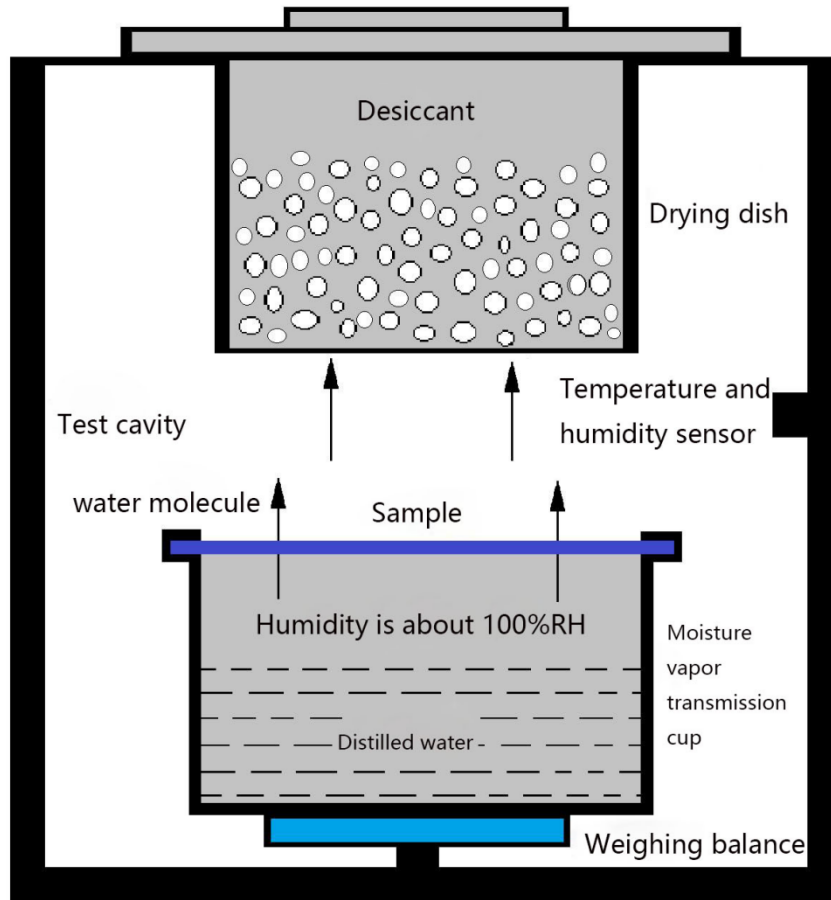
Introduction

W301 2.0 WVTR is based on the test principle of the gravimetric method (weight loss), and is developed, designed and manufactured in accordance with GB/T 1037, ASTM E96 and other standards. It is suitable for the water vapor transmission performance test of films, sheets, paper, packaging and related materials in the fields of food, medicine, medical equipment, daily chemicals, photovoltaic electronics, etc. It provides high, medium and low water vapor barrier materials Wide-range, high-efficiency water vapor transmission rate detection.

Test principle

Add distilled water to the dry and clean moisture-permeable cup, seal the moisture-permeable cup with a pre-treated sample and place it in the test chamber.

By controlling the temperature and humidity, the distilled water in the moisture-permeable cup is evaporated, and the evaporated water vapor passes through the film The drying device absorbs and measures the weight of distilled water in the moisture permeable cup with time to obtain parameters such as the moisture permeability of the sample.



Working principle diagram

Standard

GB/T 1037 GB/T 16928 ASTM E96/E96M ASTM D1653 TAPPI T464 ISO 2528
 DIN 53122-1 JIS Z0208 YBB 00092003

Specification

Item	Technical parameters
Test range	0.1~10000 g/(m ² ·24h)
Test precision	0.0001 g/(m ² ·24h)
Temperature range	15~55°C
Temperature	±0.1°C
Humidity range	≤10%RH
Humidity accuracy	±2%RH

Item	Technical parameters
Test area	50.24 cm ²
Sample size	Φ90 mm
Sample thickness	≤3mm
Number of sample	1 piece
Power	450 W
Power supply	AC 220 V 50 Hz
Size	380mm*545mm*315mm

Features

◆ High precision load cell

The instrument is equipped with a high-precision weighing sensor, with high weighing efficiency, stable performance, and a resolution of 0.0001 g/(m² · 24h).

Temperature control The semiconductor stabilizer automatically controls the temperature, and the temperature control accuracy is 0.1 °C.

◆ Meet the needs of high-throughput, wide range and high-applicability testing

Equipped with a single chamber, which is small and flexible, and the test efficiency is high. Measuring range of 0.1~10000 g/(m²·24h), wide range, to meet the test needs of high, medium and low barrier materials, plus suitable accessories, can measure the water vapor transmission of bottles, bags, bowls and other containers.

◆ Excellent shape, convenient control, real-time visualization of curves

With exquisite 3D printed shell, smooth lines, the instrument is fashionable and beautiful.

The instrument is fully automatic operation, one-button test, automatic judgment, automatic shutdown.

Real-time display of transmission - time, temperature - time, humidity - time, flow - time four sets of curves, curves support preview hidden function.

◆ Intelligent operating system, global certification

We develop intelligent operating system by ourselves, with modular graphics, flexible setting

of test process parameters, intuitive and convenient operation.

Designed according to the GMP appendix "Computerized System", it has the function of auditing and tracking, and multi-level permission settings for users can meet the requirements of the pharmaceutical industry for data traceability.

Personalized test reports are set on demand, support a variety of formats of data output, support electronic signature function, online submission of audit report function.

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


Our company has approved and issued by the "General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China": water vapor transmission rate, "National Standard Material Classification Certificate" and "People's Republic of China Manufacturing Measuring Instrument License", the standard number (GBW (E)130543 / GBW(E)130544). The instrument is calibrated and verified by the national standard material independently developed to ensure the accuracy, versatility and authority of the test data.





◆ **Laboratory intelligent IoT platform**

The instrument can be connected to the IoT platform to achieve digital network management. Remote authorization to log in to the IoT platform can realize these functions such as managing experimental data, remote diagnosis and troubleshooting etc.

Customers can download the required instrument materials, documents, and operation videos on the platform.

Application

	Film	Water vapor transmittance test of various plastic films (PP/PET/PE/PVC/BOPP/PP, etc.), plastic composite films, paper-plastic composite films, metal composite films, coextruded films, aluminized films, degradable packaging films (PLA/PBAT/PBS, etc.) and other film-like materials.
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	Sheet	Water vapor transmittance test of solid pharmaceutical hard sheets (PP/PVC/PTP, etc.), metal composite sheets, rubber sheets and other flakes.
	Paper, cardboard and its composites	Water vapor transmittance test of coated paper, silicone paper, cigarette bag aluminized paper, paper aluminum-plastic composite sheet and other paper and cardboard.
	Medicinal patches	Water vapor transmission performance test of medical plasters
	Package	Customizable fixtures can be extended to packages such as pharmaceutical polyethylene bottles, sealed bags, pharmaceutical ointment tubes, infusion hoses, plastic trays, etc.

Factory configuration

Standard configuration	Power cord, weighing pan + syringe, moisture permeable cup, sampler, sealing grease, standard weight, 4A molecular sieve, serial port cable, Allen wrench, mouse, 125µm standard film, wire and aviation socket welding components, Phillips screwdriver
Optional	Computer, calibration certificate

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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 Call +44 (0)1354 699899
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