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Analysis & Testing Instruments

Gravimetric Method Water Vapor Permeability Analyzer W303 2.0

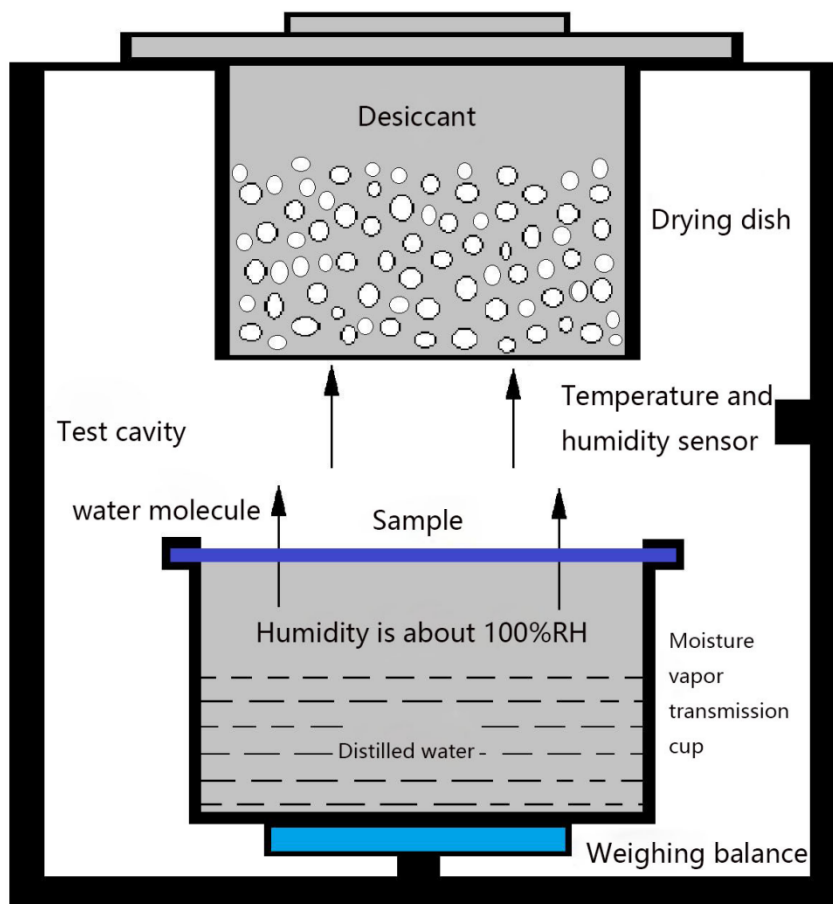


Product introduction

The W303 WVTR tester is designed and produced based on the test principle of weight method (weight reduction) and as per the standards of GB/T 1037 and ASTM E96, etc. It is suitable to measure the water permeability performance of film, sheets, papers, packagings and other related materials in the industries of food, pharmaceutical, medical equipment, daily chemicals, Photovoltaic electronics, etc, providing wide range and high efficiency water vapor transmittance detection for high, medium and low water vapor barrier materials.

Test principal

Adding distilled water to a dry, clean test dish, put the test dish sealed by pre-processed sample into the test chamber, by controlling temperature and humidity, make the distilled water in the test dish evaporate, the evaporated water vapor is absorbed by the drying device through the film, by measuring decreasing weight change of distilled water in the test dish over time, obtain the parameters of water vapor permeability of the sample, etc.



Working principle diagram

Weight loss principle diagram

Standards

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

Technical Parameters

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 accuracy	±0.1°C

Item	Technical parameters
Humidity range	≤10%RH
Humidity accuracy	±2%RH
Test area	50.24 cm ²
Sample size	Φ90 mm
Sample thickness	≤3mm
Number of test sample	3 pieces
Power	1300 W
Power supply	AC 220 V 50 Hz

Product Features

◆ High precision load cell

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

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

◆ Meeting the test requirements of high throughput, wide range and high applicability

The instrument is equipped with 3 chambers with independent data, which can meet the requirements of high throughput testing and testing efficiency is high.

Wide measuring range 0.1~10000 g/(m²· 24h) meets the testing demand of high, medium and low barrier materials. By using customized fixtures also can measure the water vapor transmission of bottles, bags, bowls and other packaging parts.

◆ Outstanding shape, easy operation, real time visual curve

The product is designed from the Angle of ergonomics and technical aesthetics Exquisite 3D printed shell, smooth lines, beautiful fashion, novel and unique.

Automatic operation, one key test, automatic judgment, automatic shutdown.

Real-time display four groups of curves of transmittance - time, temperature - time, humidity - time, weight - time, curves support preview hiding 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 report can be set as required, supporting multiple formats of data output. Support electronic signature, online submission of audit report function.

◆ Professional calibration service, data is accurate and reliable

Our company has "National Standard Material Grading Certificate" and "Manufacturing Measuring Instrument License of the People's Republic of China" for water vapor transmission rate analyzer issued by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, The reference material no is GBW(E)130543 / GBW(E)130544. The instrument is calibrated and verified by national standard materials developed independently to ensure the accuracy, versatility and authority of the test data.

◆ Laboratory intelligent IoT platform

The instrument can be connected to IoT platform, 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 information, documents and operation videos on the platform.

Application

	<p>Film</p>	<p>Water vapor permeability tests of membrane materials such as All kinds of plastic film (PP/PET/PE/PVC/BOPP/PP, etc.), plastic composite film, paper-plastic composite film, metal composite film, co-extrusion film, aluminum plating film, degradable packaging film (PLA/PBAT/PBS, etc.), etc.</p>
	<p>Sheet</p>	<p>Water vapor permeability tests of solid pharmaceutical hard sheet (PP/PVC/PTP, etc.), metal composite sheet, rubber sheet and other sheet materials.</p>
	<p>Paper, paperboard and composite materials</p>	<p>Water vapor permeability tests of Coated paper, silicone paper, cigarette aluminized paper, paper aluminum-plastic composite sheet, paper board.</p>
	<p>Medicinal patches</p>	<p>Water vapor permeability tests of medical plaster for treatment.</p>
	<p>Package</p>	<p>Customizable fixtures can be extended to packages such as pharmaceutical polyethylene bottles, sealed bags, pharmaceutical ointment tubes, infusion hoses, plastic trays, etc.</p>

Factory configuration

<p>Standard configuration</p>	<p>Power cord, Scale + syringe, wet cup, sampler, Sealing grease, standard weights, 4A molecular sieve, Serial cable, Hex Wrenches, mouse, 125μm standard film, wire and aviation socket welding kit, cross screwdriver.</p>
<p>Optional</p>	<p>Computer, calibration certificate</p>

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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