KASON-WTM100 Water Vapor Transmission Rate Meter

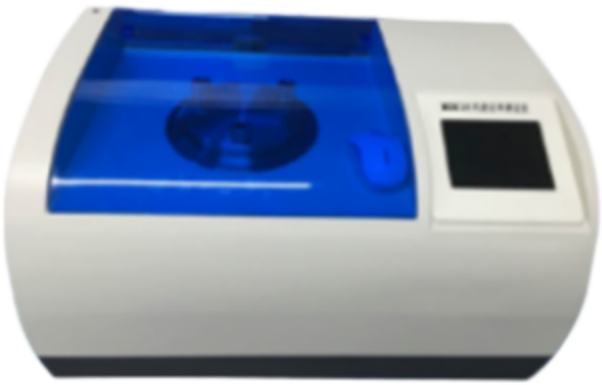

Image for reference only.

Instrument Introduction:

Instrument Introduction: The water vapor transmission rate meter is used to determine the water vapor transmission rate (amount) of thin films or sheets.

Suitable for:

1) Plastic films, composite films, aluminum foil, metallized films, etc.;

2) Various sheets, plates, rubber, ceramics, etc.;

3) Packaging containers, such as bottles, bags, bowls, etc.;

4) Extended applications, such as solar backsheets, LCD screen films, medical patches, etc.

Applications include quality inspection, pharmaceutical testing, scientific research, packaging, film, food, pharmaceuticals, daily chemicals, electronics, and other industries.

Working Principle:

Utilizes the electrolytic sensor method. The sample divides the test chamber into upper and lower chambers. The upper chamber contains humidified nitrogen, and the lower chamber contains dry nitrogen. Water molecules in the upper chamber diffuse through the sample to the lower chamber. The water vapor concentration in the lower chamber is measured by the electrolytic sensor, thereby calculating the water vapor transmission rate (amount) of the sample.

Execution Standards:

GB/T 21529-2008, YBB 00092003-2015, BS EN ISO 15106-3-2005, ASTM E398-2013, DIN 53122-2

Product Features:

Accurate and Reliable Data: Features universal temperature and humidity calibration interfaces for repeatability testing; data dispersion for the same sample is less than 10%. Ensures the accuracy, universality, and authority of the test data.

Easy Operation: Supports professional software with a simple and clear interface for easy operation; test procedures can be flexibly configured.

Fully Automatic Operation: One-button testing, automatic judgment, and automatic shutdown.

Bypass, rinsing, testing, and baseline setup are all automatically controlled; experimental status is displayed in real time.

Real-time display of four curves: temperature, humidity, water vapor concentration, and transmittance; curves support preview and hiding functions; supports background database query function.

The main unit is equipped with a color touchscreen; no external computer is required, allowing real-time observation of temperature, humidity, and transmittance.

Professional test reports are automatically generated and can be exported to Office, PDF, and other formats.

Technological Advancement:

Temperature Control: Employs internationally advanced electromagnetic programmable temperature control technology for automatic heating and cooling; eliminates the need for external temperature control devices, avoiding their bulkiness and malfunctions; high measurement accuracy, down to 0.1℃.

Humidity Control: Uses a dual-airflow (dry and wet) humidity control method, accurate to 1%RH, ensuring stable humidity.

Equipped with a cutting-edge ARM control system, it can operate independently without a computer.

High Testing Efficiency: Offers three measurement modes: high, medium, and low barrier properties, suitable for testing films with varying barrier properties.

Measurement accuracy reaches 0.001 g/m²·24h, capable of measuring high-barrier materials such as aluminum foil.

With compatible accessories, it can measure water vapor transmission through containers such as bottles, bags, and bowls.

Access Control and Data Tracking: The software is designed according to the requirements of the new GMP appendix for computerized systems.

Username and password login is required for the workstation.

Users are categorized into multiple levels, including operators and administrators (such as

administrators, operators, observers, etc., but not limited to these levels).

Administrators can adjust permissions for each level; for example, adding or removing system control items at a specific level.

It features audit trail functionality (system audit trail, project operation audit trail, method audit trail), recording every data change; ensuring the security and integrity of test data.

Metrology and Verification: This instrument supports standard substance verification and calibration; operation is simple, users only need to perform routine testing using standard substances and then input the measured data into the instrument interface.

The instrument is stable, reliable, and easy to maintain. It uses imported electrolytic sensors, offering high accuracy and stability, and can operate for extended periods. Automatic over-range protection for sensors prevents damage to critical sensors in case of instrument failure. Modular design facilitates maintenance.

Technical Parameters:

Test Range: 0.001~100 g/(m²·24h) (films and sheets)

Test Accuracy: 0.001 g/(m²·24h) (films and sheets)

Temperature Control Range: 15~45℃ (5~55℃ optional)

Temperature Control Accuracy: ±0.1℃

Humidity Control Range: Dryness = 0%RH, Humidity = 30~90%RH, 100%RH

Humidity Control Accuracy: ±1%RH

Transmitting Area: 50.24 cm² (with adapter, minimum 0.785 cm²)

Sample Size: Φ100 mm

Sample Thickness: ≤2mm

Sample Quantity: 1 piece

Carrier Gas: 99.999% Nitrogen (user-supplied)

Carrier Gas Pressure: ≥0.1MPa

Carrier Gas Flow Rate: 5~120 mL/min

Gas Source Interface: Φ3mm tubing

Dimensions: 61×55×40cm

Weight: 80kg

Power 750W power supply AC 220V, 50Hz

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