

W501 Water Vapor Permeability Analyzer



Function

W501 water vapor permeability analyzer is to test the water vapor transmission rate (WVTR) of films or sheets materials.

Applied to:

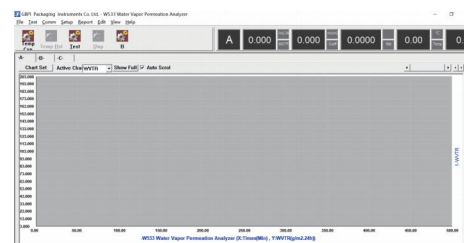
- 1) Plastic film, composite film, aluminum foil, aluminized film, etc;
- 2) Sheet, panel, rubber, ceramics, etc;
- 3) Packaging containers, such as: glass, bottle, cans, boxes, etc;
- 4) Expanding application: solar panel, LCD film, medical patch, etc.

Widely used in quality inspection organizations, drug control institutions, research institutes, packaging, thin film, food companies, pharmaceutical enterprises, personal care industry, electronics industry and so on.

Test Principle

Desiccant method (one of gravimetric/dish method). Fix the test sample in the middle of test chamber to separate the chamber into upper room and lower room; humid gas flows in upper room, and place desiccant device in lower room; as in lower room it remains dry (0-8%RH) by desiccant, water molecules penetrate through the sample from upper room into lower room, absorbed by desiccant; then the dish weight will increase; system weigh the increasing dish weight so as to calculate the water vapor transmission rate.

Software Interface



Technical Specification

Items	Technical Parameters
Test range	0.1~10000 g/m ² ·24h
Test precision	0.001 g/m ² ·24h
Weight range	0.1mg ~ 200g
Temperature range	15~55°C
Temperature accuracy	±0.1°C
Humidity range	30~90%RH, 100%RH
Humidity accuracy	±1%RH
Test area	86.54 cm ²
Sample size	Φ125 mm

Items	Technical Parameters
Sample thickness	≤5mm
Number of test sample	1 piece
Interface size	1/8 inch metal pipe, Φ4mm polyurethane tube
Carrier gas & pressure	Compressed air ≥0.2MPa
Instrument size	680×520×450mm
Weight	50kg
Power	750W
Power supply	AC 220V 50Hz



Features

Accurate and reliable data

- With The State Certificate for Gradation of the certified Reference Materials and Licence for Manufacturing Measuring Instruments of the state Reference Materials(GBW(E)130543/4)of Water Vapor Permeability Analyzer approved and issued by General Administration of Quality Supervision, Inspection and Quarantine of the P.R.C. Adopting state reference materials to calibrate and verify the instruments, ensure the accuracy, universality and authority of the test data.

Simple operation

- Professional software with simple interface, easy to use and convenient to set test process.
- Computer automatically monitors the whole test procedure: auto test, auto judgment, and auto stop.
- Curves display of transmission, water vapor concentration, temperature and humidity in real time and could zoom in and out. The curves with conceal function, support query function for background data.
- Professional test report; can be exported in Office or PDF formats easily.

Advanced technology

- Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1°C.
- Humidity control: Dual gas flow method(dry gas and humid gas), high precision (1%RH) and stable flow.
- Mainframe configures with color touch screen, can observe temperature, humidity and transmission and can run independently without external computer.
- Introduce multiple foreign advanced technologies, precision is as high as 0.001 g/m²•24h.
- Carry cutting-edge ARM controlling system, running independently without computer.
- Automatic over range protection.
- Humidity control utilizes proportioning dry and wet gas, perform excellently.

High efficiency

- With one test chamber, test rate is fast.
- High precision sensor, continuous weighing and data acquisition, so test data is reliable.
- By adding adaptive accessory, can test water vapor transmission of various containers such as bag, bottle, can and bowl.
- Can be expanded up to 10 Chambers.

Calibration & Certification

- The instrument supports two calibration methods, reference materials (standard PET films) method and weight method to calibrate and certificate; operation is simple, user only need use certified reference materials for normal testing, and then input the test result into the instrument interface.

Reliable and easy-maintenance instrument

- Adjustment parameters are managed by coded lock. The whole procedure is finished automatically.
- Sensor over-range protection, prevent damaging important sensors.
- Function modularization, easy to maintain.



ASTM E96/E96M-2016

ASTM D1653-2013

ISO 2528-1995

YBB00092003-2015

GB/T 1037-1988

GB/T 16928-1997

TAPPI T464

DIN53122-1

JIS Z0208-1976



Configuration

Water vapor permeability analyzer, Power cable, Communication cable Scale tray, Sample cutter, Sealing grease, Weight, 4A molecular sieve, Allen wrench, Drying vessel, Rubber pipe, Pipe throttle valve, Air pipe adaptor, Cross screwdriver, T-Cock, Reference material(PET film), Pressure regulator, Wooden box

Users owned

Computer, 1 piece of drying vessel, 3 pieces of 500-1000ml wide-mouth bottle(all samples must be degassed and dehydrated for 24 hours), Muffle furnace or drying device with temperature can reach 500°C, special desiccant for drying device (can use for several times after drying), Air supply through secondary filtration (separation of oil and water), air compressor (2.5HP, 8KG pressure), 5L first-class distilled water