

This is based on the differential pressure method, and professionally applicable to the determination of gas transmission rate of finished package containers. Test gases could be air, oxygen, nitrogen, and carbon dioxide, and testable containers include various bottles of carbonated drinks, juice, tea, as well as packages of edible oil, dairy products, washing supplies and metal containers.



Professional Technology

- The GTRs of the whole hollow containers for distinct gases (air, O₂, CO₂, and N₂) are available
- Patented structure design and test method effectively solve problems involving container tests
- 3 testing cells are available, and the average value of three specimens could be obtained at one operation
- Both inner and outer chambers of test containers are evacuated to ensure accurate and effective test data
- The system is controlled by computer and test process is automatic
- Professional operating software integrates intelligent operation with multi-function data analysis
- Equipped with RS232 port for convenient data transfer
- Supports Lystem[™] Lab Data Sharing System for uniform management of test results and test reports

Test Principle

The pre-conditioned hollow container is mounted in the gas diffusion cell as to form a sealed barrier. The inner and outer chambers of container are evacuated firstly, followed by the evacuation of the entire cell. A flow of test gas is thereafter introduced into the evacuated outer chamber and a constant pressure difference is generated between two chambers. The gas permeates through the specimen from higher pressure side into the lower side. The gas permeability and other barrier properties of the specimen can be obtained by monitoring the pressure difference of inner chamber.

Applications

This test instrument is applicable to the determination of gas permeability of:

Basic Applications	Containers	Test the gas permeability of finished package containers, e.g. carbonated drinks bottles, juice bottles, edible oil packages, tea drinks bottles, dairy product packages, washing supplies packages and metal packages
Extended Applications	Various Gases	Test the permeability of various types of gases, e.g. O ₂ , CO ₂ , N ₂ , Air and mixed gas

Technical Specifications

Specifications	Package Test

Test Range	0.0001 ~ 1800 mL/pkg·day
Vacuum Resolution	0.1 Pa (standard)
Number of Specimens	1, 2 or 3
Test Temperature	Ambient Temperature (Standard)
Test Humidity	Closed Mode: 0% RH, 2% RH ~ 98.5% RH, 100% RH
Test Gas	O ₂ , N ₂ , and CO ₂ (outside of supply scope)
Gas Supply Pressure	0.4 MPa ~ 0.6 MPa
Port Size	Φ6 mm PU Tubing
Specimen Size	Max od. < Φ114 mm; height < 350 mm; Bottle mouth: od. < Φ47 mm, id. > Φ9 mm; Customization is available.
Instrument Dimension	670 mm (L) x 490 mm (W) x 653 mm (H)
Power Supply	AC 220 V 50 Hz
Net Weight	50 kg

Configurations

Standard Configurations	Mainframe, Professional Software, Vacuum Pump, Sample Sealant and Glass Filler
Optional Parts	Sample Sealant and Glass Filler
Note	1. The gas supply port of the instrument is Φ6 mm PU Tubing; 2. Customers will need to prepare for gas supply.

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