

Y 201D Oxygen Permeation Tester



Note :

Due to keeping innovation,
the specification and
Machine pictures or color
are subject to alteration
without notice!

Function and usage

Model Y201D Oxygen permeation tester tests the high barrier materials, sheets, solar board, compound materials, PVC, rubber, paper, glass, metal and such materials of bottle, blood bags for their oxygen transmission rate (OTR value) .

This instrument is widely used in food industry, pharmaceutical industry, cosmetics, flexible packaging materials industry and college, university and quality institution for permeation rate test and quality control.

It carries the standard of GB/T 19789-2005, ASTM D 3985-1995, ASTM F 1927-1998, ASTM F 1307-1990, YBB00082003, ISO 15105-2003, DIN 53380-3-1998, JIS K-7126.

Working principle

It adopts Coulometry theory, use the high precision sensor to test the oxygen transmission rate (OTR) of flexible packaging materials.

The testing chambers including upper and nether parts, the sample film is fixed between the two chambers, the high pure oxygen (O₂) circulate in the upper chamber of the film, and the high pure nitrogen (N₂) circulate in the nether chamber of film, the oxygen molecules get through the film and spray to nitrogen in the nether chamber, and brought by the flowing nitrogen to the sensor, and the tester then analyze the oxygen concentration as what the sensor tested and calculate the oxygen permeation quantity. But for the packing containers, the nitrogen circulates in the bottle and the air or oxygen circulates outside the container. OTR unit is cm³ / (m²·24) or ppm selected by the user.

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Specifications

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|---------------------------------|---|
| 1) Measurement range | : 0.02~16500 cm ³ / (m ² •24h) (with enlarge the test chamber, the max testing range can reach 260000 cm ³ / (m ² •24h) |
| 2) Test accuracy | : cm ³ / (m ² •24h) |
| 3) Temperature range | : 15~45°C |
| 4) Temperature control accuracy | : ±0.01°C |
| 5) Humidity range | : dry degree= 0%RH, humidity=5~95%RH, 100%RH |
| 6) Humidity control accuracy | : ±1%RH |
| 7) Specimen size | : Ø80mm, transmission area 50.24cm ² (area no state in the International standard) |
| 8) Specimen quantity | : 2 pcs |
| 9) Specimen thickness | : ≤2mm |
| 10) Testing environment | : in room temperature (23°C) |
| 11) Pressure | : 0.2-0.3Mpa |
| 12) Carried gas inlet | : 1/8 inch |
| 13) Power supply | : AC220/50Hz |

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Features

1. Automatic test, the professional software system then automatically monitors the testing process, all parameters shown in real time.
2. High-precision sensors with over-range protection, continuous data collection, accurate and reliable data.
3. Automatic control temperature, low requirements for environment;
4. The humidity control adopt dual airflow humidity control method, width of humidity control, stable of temperature.
5. Two calibration methods of standard gas calibration and standard film calibration,
6. Double chamber pressure control and pressure automatic balance.
7. Versatile functions such as the auto leakage protection function, automatically judges and stops.
8. Use superior components.
9. Retrofitting clamps can test high permeability of abnormality membrane (such as lenses, etc.);
10. Retrofitting special accessories can test oxygen transmission rate of bags and bottles ;
11. Superior components ,multi-level security protection design;
12. Calibration with two method of weights and standard film;
13. CE, UL, FCC certifications;
14. Versatile operation language support.

Service

- 2 years coverage
- Speedy reply, 12hrs response to customer questions
- Software free update
- Minor maintenance ---parts ship within 24 hrs
- Major maintenance---Technical will be sent within 15 days
- Free inhouse training for customer operator