



## Oxygen permeability tester OX/231

The OX2/231 Oxygen permeability tester is applicable for the oxygen transmission rate determination of plastic films, laminated films, sheets as well as packages, like plastic bottles and pouches.

### Principle

Oxygen flows in one side of the film, and nitrogen flows on the other side. The oxygen molecules permeate through the film and into the nitrogen side, and are then carried to the sensor by the flowing nitrogen. By analysing the oxygen concentration measured by the sensor, oxygen transmission rate and other parameters can be calculated. As to packages, nitrogen flows inside the packages, and oxygen flows outside the packages.

### Configuration

#### Standard

Mainframe, mini-printer, software, nitrogen cylinder regulator, oxygen cylinder regulator.

#### Optional

Constant temperature controller, constant humidity controller, sealing accessories for package test; cover

Note: the gas inlet is 1/8 inch metal pipe and  $\varnothing$  4 mm polyurethane pipe. Users provide gas sources themselves.



### Features

- Mini-computer control
- LCD displays data, results and curves
- Manu interface, PVC operation panel
- Average value of 3 chambers only
- Constant temperature control (optional purchase)
- Constant humidity control (optional purchase)
- Two testing modes of film and package (optional purchase)
- Automotive power failure recovery
- Rapid calibration with reference film
- Mini-printer
- RS232 interface
- Network transmission interface for LAN data management and Internet data transmission.

## Technical specifications

### Film testing technical indexes

#### Test Range

0,01 - 1000 cm<sup>3</sup>/m<sup>2</sup>·day

0,1 - 10 000 cm<sup>3</sup>/m<sup>2</sup>·day (optional)

#### Resolution

0,01 cm<sup>3</sup>/m<sup>2</sup>·day

#### No. of Specimens

1 to 3 specimens

#### Temperature control range

15 - 55 °C (optional purchase)

#### Temperature control precision

+/- 0,1 °C

#### Humidity control range

0 %RH; 15 %RH - 90 %RH ; 100 %RH (optional purchase)

#### Humidity control precision

+/- 1 %RH

#### Specimen size

108 x 108 mm

#### Test area

50 cm<sup>2</sup>

#### Test gas

oxygen and air, etc, (users provide gas sources themselves)

#### Inlet size

Ø 4 mm polyurethane pipe

#### Carrier gas

high pure nitrogen with the concentration no less than 99,999% (users provide gas sources themselves)

#### Inlet size

1/8 inch metal pipe

#### Power

AC (85 ~ 264) V (47 ~ 63) Hz

### Package testing technical indexes (optional purchase)

#### Test range

0,0001 - 10 cm<sup>3</sup>/pkg·day (routine)

#### Resolution

0,0001 cm<sup>3</sup>/pkg·day

#### Specimen body sizes

100% O<sub>2</sub> Measurement

No less than Ø 120 mm, and no higher than 360 mm,

#### Open air measurement

no size limitation, No. of Specimen: 1~ 3

## Specimen specifications

bottle - internal diameter of bottle mouth Ø 8 mm; external diameter of bottle mouth Ø 42 mm (routine)

### Pouch and box

supported by accessories

### Test condition

ambient (standard condition: 23 +/- 2°C 50 %RH)

### Humidity control range

0 %RH; 15 %RH - 90 %RH ; 100 %RH (optional)

### Humidity control precision

+/- 1 %RH

### Test gas

oxygen and air (users provide gas sources themselves)

### Inlet size

Ø 4mm polyurethane pipe

### Carrier gas

high pure nitrogen with the concentration no less than 99,999% (users provide gas sources themselves)

### Inlet size

1/8 inch metal pipe

### Power

AC (85 ~ 264) V (47 ~ 63) Hz

## Physical specifications

### Film testing technical indexes

#### Dimensions

670 mm x 410 mm x 310 mm (L x B x H)

#### Net weight

48 kg

### Package testing technical indexes

#### Dimensions

670 mm x 410 mm x 630 mm (L x W x H)

#### Net weight

50 kg

## Standards

ASTM D3985, ASTM F2622, ASTM F1307, ASTM F1927, ISO 15105-2, JIS K7126-B, YBB 00082003, GB/T 19789