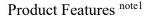


C203H Oxygen Transmission Rate Test System

C203H Oxygen Transmission Rate Test System is based on

Coulometric oxygen analysis sensor and equal pressure test metod, and is conforming to ASTM D 3985 and other standards. It provides high-precision and high-efficiency oxygen permeability tests for high and medium gas barrier materials. It is suitable for testing the oxygen permeability of thin films, sheets and related materials in the fields of food, medicine, medical devices, daily chemical, photovoltaic, electronic and other fields.





Coulometric Oxygen Sensor

- The instrument is equipped with ppb level Coulometric Oxygen Sensor of Labthink which can obtain lower test limit.
- Designed according to ASTM D3985 with absolute value and no need to calibrate.
- Super long service life, three times longer than traditional Coulometric oxygen sensor.
- Functions of over limit alarm and automatic protection.

Accurate Data

- Using 360 ° air circulation constant temperature technology, the temperature stability is better.
- Equipped with high-precision temperature and humidity sensor, real-time monitoring and recording temperature and
 - humidity changes.
- In the test process, the automatic control of flow, temperature and relative humidity is realized, and the accuracy is higher.
- Higher test repeatability of $0.02 \text{ cc} / (\text{m}^2 \cdot \text{day})$ can be achieved.

Effective Three-Cell

- Independent three sets of 50cm² standard test area cells, in line with the standard requirements for parallel sample detection.
- Three samples are tested at the same time under the same condition, and the data are independent.
- In the same test cycle, the number of samples completed increases from 2 to 3.



• Automatic clamping sample, saving time and labor, clamping force is consistent, better sealing.

Intelligent Operation

- The 12 Inch Touch panel of windows system is used for more convenient operation.
- Automatic mode after inputting the test temperature and humidity and clicking one key to start the test, the test
 proceeds automatically.
- New drawer type test cell, one key automatic in-and-out with sound and light reminder.

Safe and Reliable

- Safe Running: the innovative Labthink's high-end industrial computer is embedded to eliminate the system failure
 caused by computer virus, and ensure the operation reliability and data storage security.
- Safe Operation: equipped with optical and other intelligent sensors as well as sound and light intelligent alarms to ensure the safety of operation.
- Safe Performance: the instrument uses global famous brand with stable and reliable performance.

Powerful Functions

- Professional test mode provides flexible and rich control functions to meet the needs of scientific research.
- Provide oxygen permeability curve, oxygen transmission coefficient curve, temperature curve and humidity curve.
- Ultra wide test range, meet the barrier test (customized) of various materials.
- Ultra wide temperature range, meet the barrier test at different temperatures (customized).
- The gas purification device independently developed by Labthink can remove trace oxygen in nitrogen and provide

oxygen free carrier gas (optional).

Testing Principle

The sample is clamped between the test chambers, oxygen or air flows on one side of the film, and high-purity nitrogen flows on the other side of the film. Oxygen molecules diffuse through the film into the high-purity nitrogen in the other side. The flowing nitrogen is carried to the sensor. Through the analysis of the oxygen concentration measured by the sensor, the oxygen transmittance is calculated.

Reference Standards

ASTM D3985, ASTM F1307, GB/T 19789, GB/T 31354, DIN 53380-3, JIS K7126-2-B, YBB 00082003-2015



Test Applications

		The oxygen permeability tests of various plastic films, paper plastic	
		composite films, co-extrusion films, aluminized films, aluminum foil	
	Films compos	Films composite films, glass fiber aluminum foil paper composite films and other	
Applications			
		film like materials.	
	Sheet	The oxygen permeability tests of PP sheet, PVC sheet, PVDC sheet, metal foil, rubber sheet, silicon sheet and other sheet materials.	

Technical Parameters

Table 1: Test Parameters Notes2

Parameter / model		С203Н
	cc/(m ² ·day) (standard area 50cm ²)	0.02~200
Total Constant	cc/(m ² ·day) (standard area 50cm ²)	0.02~ 400000 (customized)
Test Scope	cc/(m²·day) (MASK area 5cm²)	0.2~ 2000 (optional)
	cc/(m ² ·day) (MASK area 1cm ²)	1~ 10000 (optional)
Resolving Power	cc/(m ² ·day)	0.01
Repeatability	cc/(m²·day)	0.02 or 1%, whichever is greater
Temperature Range	$^{\circ}$	15~50 5~60 (customized)
Temperature Fluctuation	°C	±0.05
Humidity Range	%Rh (within standard temperature range)	0%, 5∼90%±2%
	GP-01 Gas Purification Unit	Optional
Extended Functions	DataShield TM Data Shield Note 3	Optional
	GMP Computer System Requirements	Optional



	CFR21Part11	Optional	
Table 2: Technical Sp	ecifications		
Test Chamber	3 sets		
Sample Size 4" x 4" (10.1cm×10.1cm)		cm×10.1cm)	
Sample Thickness	≤120 Mil(3mm)		
Standard Test Area	50c	m^2	
Gas Specification	99.999% nitrogen, 99.5% oxygen (gas source prepared by the buyer)		
Air Source Pressure	≥ 40.6 PSI / 280 kPa		
Interface Size	1 / 8 "metal tube		
Dimensions	23.6" H x 19.6" W x 27.5" D (60cm× 50cm× 70cm)		
Power Supply	$120\text{VAC} \pm 10\%~60\text{Hz}$ / $220\text{VAC} \pm 10\%~50\text{Hz}$ (choose one from those two)		
Net weight	220Lbs(100kg)		
Table 3: Product Conf	iguration		
Standard Configuration	Mainframe, tablet computer, sampler, vacuum g	grease, polyurethane pipe with diameter of 6	
Options	Gp-01 Gas Purification Unit, air compressor, C requirements DataShield TM Data Shield ^{Note 3}	FR21Part11, GMP computer system	
Remarks	The compressed air inlet of the machine is Φ 6 550 kPa); the air source is prepared by the buye		

Note: 1 All the product features are subject to detailed descriptions in the "Technical Parameters".

Note 2: The parameters in the table are measured by professional operators in Labthink Laboratory according to the requirements and conditions of relevant laboratory environmental standards.

Note 3: DataShield[™] Data Shield System provides safe and reliable data application support. The system can be shared by multiple Labthink products. Please purchase respectively according to the usage.

Labthink is committed to the innovation and improvement of product performance and function. For this reason, the product technical specifications will be changed accordingly. The above information is subject to notice. The company reserves the right of modification and final interpretation.

Labthink®

S.I. Instruments 256 South Rd. Hilton South Australia 5033 Ph (08) 8352 5511

info@si-instruments.com.au www.si-instruments.com.au