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Limit oxygen index tester F101D



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Limiting Oxygen Index Tester

—critical value of the oxygen concentration required to the combustibility of test material

F101D Limiting Oxygen Index Tester The oxygen index of the material refers to the minimum oxygen concentration that can maintain the combustion of the material in the mixture of nitrogen and oxygen. At an appropriate oxygen concentration, the material is just right to ignite and burn. By controlling the value of oxygen concentration, this instrument can observe the combustion characteristics of samples one by one under different oxygen concentrations, so as to determine the ultimate oxygen index of samples. Good repeatability of experimental data can help manufacturers effectively control production and test product performance.

F101D Limiting Oxygen Index Tester

1. The Limiting oxygen index tester is used to measure the ultimate oxygen index of solid materials such as textiles, plastics, laminates, foams, films, etc. It can be used to evaluate the combustion performance under specified conditions, so as to guide the research and development of materials and provide data basis for the acceptance of products, new material R&D and product quality acceptance.

2. Sample fixed vertically in the transparent combustion cylinder with the upward flow of oxygen, nitrogen gas mixture in, lit the top of the sample, observing the combustion characteristic of sample, comparing the sample continuous burning time or sample combustion length with the given limit value. through a series of experiments under different oxygen concentration, measured the minimum oxygen depth value for maintaining combustion expressed as a percentage of oxygen, simple operation, easy to use, high efficiency.



Standards compliant

GBT 2406.1 Plastics Test of burning behaviour by oxygen index –Part 1: guideline;

GBT 2406.2 Plastics Test of burning behaviour by oxygen index –Part 2: Indoor-temperature test;

GBT 5454 Textiles Performance test of burning by oxygen index;

GBT 10707 Rubber Performance test of burning behaviour;

ISO 4589-2 Plastics Test of burning behaviour by oxygen index –Part 2: Indoor-temperature test;

ASTM--D2863 Standard Test Method for Measuring the Minimum Oxygen Concentration of material combustion which is similar to plastics material (Oxygen Index);

F101D Limiting Oxygen Index Tester — Several Major Features



Imported sensors

Imported Paramagnetic oxygen concentration sensor with high precision and stable performance. Real-time detection of oxygen concentration with PLC precise control so that can adjust the oxygen concentration through the airflow.



Flexible fixture design

The fixture is made of refractory and stainless material, which can resist high temperature and rust. It can hold various samples. By replacing the sample holder, the sample requirements of different characteristics can be fulfilled.



Intelligent touch operation

7-inch color screen, intelligent touch, multi-touch operating system, convenient operation, multi-language display, switching between Chinese and English. Simplified operation interface, easy to operate



Quick change structural design

The test tube of this instrument which is made of high temperature resistant transparent glass combining with the base adopts quick change design to clearly observe the combustion situation in the test. Moreover, it is easy to clean after the test. The stainless steel base can avoid the influence of various corrosion on the test data, and its service life is long.

F101D Limiting Oxygen Index Tester — Field Application



This instrument measures the minimum oxygen volume percentage concentration at just required for maintaining combustion of the polymer. It is suitable for a wide range of materials by changing the sample fixture used in a variety of mechanical properties of the sample. It can be used for the determination of burning performance of plastics, rubber, fiber, foam, film, textile and wood.



It is applicable to the performance verification of new products, quality control of the production department, and the material properties for the third-party testing organization, the product performance verification laboratory, and the quality and technical supervision department, etc.



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F101D Limiting Oxygen Index Tester — Configuration parameter

■ Standard configuration ■■■



101A01

diameter (75-100mm)
Combustion test tube
heat-resistant glass



101A02

specimen holder
(plastic products)



101A03

glass beads (200g/pack)
diameter 3-5mm



101A04

Sample loading device



101A05

anchor ear



101A06

igniting gun/set



101A07

Oxygen concentration sensor



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F101D Limiting Oxygen Index Tester — Configuration parameter

Optional Accessories



101A08

igniter



101A09

specimen holder
(plastic products)

Technical Parameters

Operating mode:Full color touch screen control	Control range:0~100%, $\pm 0.2\%$
Language:Chinese-English interface	Inlet air pressure: $\leq 1\text{ MPa}$
Burner:Inner Radius79mm;height500mm	test air pressure:0.15-0.2MPa
Glass beads: $\Phi 4\text{mm}$,height 80-100mm	Gas flow rate:12.01L/min
Igniter inner diameter:2mm	Dimension:700 mmx750mmx460 mm
Igniter length:400mm	Weight:45kg
Air inlet:7mm	Power supply:220V 50Hz



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