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Mask testing equipment

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MASK TESTER

1.DRK313 Mask tightness tester

2. DRK-1000 Mask bacterial filtration efficiency (BFE) tester

3. DRK703 Mask visual field tester

4. DRK227 Mask synthetic blood penetration tester

5. DRK-1070 Blocking dry microorganisms from penetrating the experimental system

6. DRK-1071 Wet-resistant microorganism penetration tester

7. DRK-128C Rotary color fastness friction tester

8. DRK308 Fabric surface wetting tester

9. Martindale wear tester

10. DRK260 Mask respirator resistance tester

11. DRK206 Mask gas exchange pressure difference

12. DRK-308B Protective clothing impermeability tester

13. DRK-LX Gelbo flex tester

14. DRK-1000A Anti-bloodborne pathogen penetration tester

15. DRK-506 Meltblown cloth particle filtration efficiency PFE tester

16. DRK-101 Medical mask protective clothing comprehensive testing machine

17. DRK-641 Mask temperature and humidity pretreatment box

18. Micro leak tightness tester

DRK313 Mask tightness tester

Technical Parameter	
Concentration range	0~100,000pcs/cm3
Particle size	0.02~1.0μm
Flow	Sampling flow: 100cm3/min Total flow: 700cm3/min
Fitting coefficient test	Direct test (Cout/Cin)
Alcohol	99.5%+isopropanol (analytical pure)
Display	7inch true color touch screen
Communication interface	USB*3 (Host*2, Device*1) Ethernet interface*1
Connection port	Environmental port, sampling port
WIFI	Equipped
Language	English, French, Spanish, Portuguese, Chinese
Flow control	Sensor control
Controllable operation of PC	One computer can control 4 instruments at the same time
Data output format	Microsoft Excel
Operating temperature	15~35℃
Power supply	AC 110~240V 50/60Hz
Dimensions	208*117*262mm
Weight	2.1kg
Annex	Reagent bottle for alcohol, protective cap, reagent stick, zero count filter, filter, sampling tube, instruction manual, AC adapter, touch screen pen
Option	Fitting coefficient test kit

Features:

1. Suitable for 100/99/P3/HEPA series masks for the tightness test of disposable filter masks (including N95/N90/KN95 and other disposable dust masks); 2. Fitting test for half masks and full face masks; 3. Gas mask fit test; 4. PAPR mask fit test; 5. SCBA respirator mask fit test; 6, 7 inch true color touch screen; 7, independent or computer control; 8. CNC technology; 9, English, French, The five languages of Spain, Portugal, and Chinese can be switched and displayed; 10. Comply with American OSHA standards and Canadian Standards Association (CSA) guidelines, including N95; 11. With multiple communication interfaces (USB, Ethernet), WIFI can also be enabled; 12. One computer can control four instruments at the same time.

DRK-1000 Mask bacterial filtration efficiency (BFE) tester

The main performance indicators of the DRK-1000 mask bacterial filtration efficiency (BFE) detector not only meet the requirements of the test instrument in Appendix B of the YY0469-2011 Bacterial Filtration Efficiency (BFE) Test Method, but also meet the requirements of the American Society for Testing and Materials ASTMF2100, ASTMF2101, and European EN14683 standards require innovative improvements based on the requirements of ASTMF2100, ASTMF2101, and European EN14683 standards. The use of dual gas circuits simultaneously contrasts the sampling method to improve the accuracy of sampling.

Executive standard

Q/0212 ZRB003-2015 Bacterial filtration efficiency (BFE) detector for medical surgical masks

Related intellectual property

No.: ZL200820224142.6 Electric flow regulating valve

No.: ZL200820224143.0 Air capacity

No.: ZL200920308391.8 Air filter material filtration efficiency detector

Features:

1. Negative pressure experiment system to ensure the safety of operators; 2. The negative pressure cabinet has a built-in peristaltic pump, A and B two-way six-stage Andersen; 3. The special microbial aerosol generator bacteria night spray flow rate can be set, Good atomization effect; 4. Embedded high-speed industrial microcomputer control; 10.4-inch industrial-grade high-brightness color touch screen; 5. USB interface, supporting U disk data transfer;

6. The front-switching glass door is convenient for the observation and operation of the experimenter.

DRK703 Mask visual field tester

DRK703 Mask visual field tester is produced according to relevant standards and is mainly used for visual field testing of masks, face masks, respirators, etc. It is suitable for masks and respirator manufacturers, quality supervision, scientific research, wear and use, etc.

Main indicators

1. Radius of semi-circular arc bow: 335mm.
2. Left and right field of view: ≤120°.
3. Bulb distance: the line of the apex of the bulb is behind the midpoint of the two eyes (7±0.5).

Applicable standards

GB/T 32610-2016, GB 2626-2019, GB2890-2009

Features:

1. The overall equipment is composed of semi-circular arc bow, recording device, seat frame, test head mold, etc. 2. Semi-circular arc bow: The radius (300-340) mm can be rotated around the horizontal radius surface passing through the midpoint 0°, and there is a scale every 5° from 0° on both sides extending to 90° arc bow, equipped with slidable White visual mark. 3. Recording device: The recording needle is linked with the optotype through components such as axle wheels, and records the position and angle of the optotype correspondingly on the visual field drawing. 4. Seat frame: used to support the semi-circular arc bow and fix the recording device. 5. Test head mold: A standard head mold meets the requirements of GB 2890.

DRK227 Mask synthetic blood penetration tester

Technical parameter	
Spray distance	300mm~305mm adjustable
Nozzle diameter	0.84mm
Jet velocity	450cm/s, 550cm/s, 635cm/s
Weight	35kg
Power supply	AC220V 50Hz

Technical index:

1. The protruding sample fixing device can simulate the actual use state of the mask, leaving the test target area without destroying the sample, and distributing the synthetic blood in the target area of the sample.

2. It can fully simulate the injection speed corresponding to the average human blood pressure 10.6kPa, 16kPa, and 21.3kPa for testing.

3. It can fully simulate the injection speed corresponding to the average human blood pressure 10.6kPa, 16kPa, and 21.3kPa for testing.

4. It is equipped with a fixed target plate, which increases the accuracy and repeatability of the liquid velocity sprayed on the sample.

Standards compliant:

GB 19083-2010

YY/T 0691-2008

YY 0469-2011

ISO 22609:2004 Protective equipment for infectious pathogens Test method for resistance to penetration of synthetic blood by medical masks (fixed volume, horizontal spray)

ASTM F1862-07 Standard Test Method for Resistance of Medical Face Masks to Penetration by Synthetic Blood (Horizontal Projection of Fixed Volume at a Know Velocity)

DRK-1070 Blocking dry microorganisms from penetrating the experimental system

Technical parameter	
Power supply	AC 220V 50Hz
Power	Less than 2000W
Vibration form	Gas ball vibrator
Vibration frequency	20800 times/minute
Vibration force	650N
Working desk size	40cm×40cm×10cm
Experimental container	6 stainless steel experimental containers
Negative pressure range of negative pressure cabinet	-50~-200Pa
High efficiency filter filtration efficiency	Better than 99.99%
Ventilation volume of negative pressure cabinet	≥5m³/min
Data storage capacity	5000 groups
Host size W×D×H	(1000×680×670)mm
Total Weight	About 130Kg

Features:

1. Equipped with fan exhaust system and high efficiency filter for air inlet and outlet, built-in leakage protection switch to ensure the safety of operators; 2. Special operating software, user password protection, automatic fault detection protection; 3. Industrial-grade high-brightness color touch display 4. Large-capacity data storage, save historical experimental data; 5. U disk export historical data; 6. Built-in high-brightness lighting in the cabinet; 7. The stainless steel inside the cabinet is integrally processed and formed, and the outer layer is sprayed with cold-rolled plates. Heat insulation and flame retardant between the inner and outer layers.

Standard: EN ISO 22612-2005: protective clothing against infectious agents, test method for preventing penetration of dry microorganisms

DRK-1071 Wet-resistant microorganism penetration tester

Technical parameter	
Turntable speed	60rpm±1rpm
Test refers to the pressure on the material	3N±0.02N
Outward wheel speed	5～6 rpm
Timer setting range	0～99.99min
Total weight of inner and outer ring weights	800g±1g
Dimensions	460*400*350mm
Weight	30kg

Product Standards

YY/T 0506.6-2009 "Surgical drapes, surgical gowns and clean clothes for patients, medical staff, and instruments-Part 6: Test method for moisture barrier microbial penetration".

ISO22610-2018: Surgical drapes, surgical gowns and clean clothes for medical staff and instruments. Test method to determine the resistance to moisture penetration by bacteria.

Instrument characteristics

1. Color touch screen display operation. 2. Highly sensitive touch control. 3. Test means the force applied to the material is adjustable.

DRK-128C Rotary color fastness friction tester

Technical parameter	
Speed range	1-120 times/minute
Counting range	0-999999
LCD display life	About 100,000 hours
Number of effective touch screens	About 50,000 times

The touch color screen color fastness friction measurement and control instrument (hereinafter referred to as the measurement and control instrument) adopts the latest ARM embedded system, 800X480 large LCD touch control color display, with high precision and high resolution, and simulates a microcomputer control interface, which is simple and convenient to operate. Greatly improve test efficiency. Stable performance, complete functions, multiple protection systems (software protection and hardware protection) are designed to be more reliable and safer.

Standard

GB/T 29865 - 2013 Textiles Color fastness test Color fastness to rubbing Small area method AATCC 116 ISO 105 X16

DRK308 Fabric surface wetting tester

Technical parameter	
Sprinkler	19 holes (uniform)
Aperture	¢ 0.9mm
Spray length	150mm
Spray time	25-30 seconds
Water spray	250ml distilled water
Dimensions	200mm×200mm×400mm
Weight	2kg

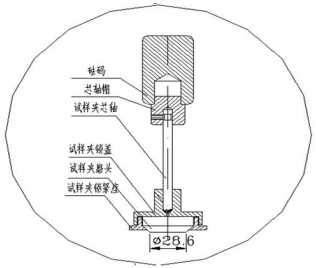
DRK-308 Fabric Surface Moisture Resistance Tester is designed and manufactured in accordance with GB4745-2012 "Textile Fabrics-Determination of Surface Moisture Resistance-Moisture Test Method". It is suitable for measuring the moisture resistance of fabrics that have or have not been water-resistant or water-repellent finishing. (Dipped in water).

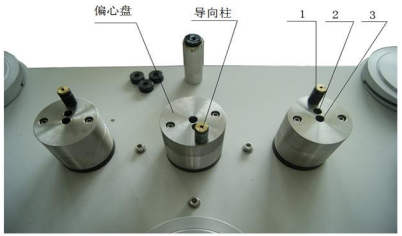
Martindale wear tester

Features

1. This machine is composed of two parts: the main body of the instrument and the electric. It has a desktop structure, and the test work is carried out through the electric control system.
2. When the preset times are completed, the instrument will stop automatically.
3. The man-machine interface is easy to operate, and the display is intuitive.

Standards: GB/T4802.2, GB/T21196.1～4, GB8690, ASTMD4966, ASTMD4970, ISO12945.2





Technical parameter	
Number of friction heads	9
Diameter of sample holder	Φ38mm and Φ90mm
Diameter of grinding table	Φ120mm
The total weight of the 38mm diameter specimen holder and guide rod is	(198±2)g
The total weight of the 90mm diameter sample holder, guide rod and O-shaped rubber ring is	(155±1)g
The total weight of the 90mm diameter sample holder, guide rod, O-shaped rubber ring and loading block is:	(415±2)g
Heavy hammer:	395g±2g, 594g±2g
The total mass of the loading block and specimen clamp assembly should be	Large block (795±7)g, that is, the nominal pressure applied to the sample is 12kPaA small piece of (595±7)g, that is, the nominal pressure applied to the sample is 9 kPa
Counting range	Preset count 1～990000 times
Test speed (rotating speed of grinding head)	47.5±2.5r.p.mNote: The standard configuration only carries 47.5±2.5r.p.m, and the other 25r.p.m and 75r.p.m need to be selected.
power supply	220V±10%, 50Hz
Motor Power	120W
Dimensions	850mm*600mm*400mm
weight	Instrument 120kg Accessory box 22kg

DRK260 Mask respirator resistance tester

Technical parameter	
Flowmeter range	0～100L/min, accuracy is 3%
Digital differential pressure measurement process	0～2000Pa, accuracy is 1Pa
Air pumping volume	100L/min
Dimensions	460×1080×670mm
Power supply	AC220V 50HZ 650W
Weight	55kg

Standards compliant:

GB 19083-2010 Technical requirements for medical protective masks GB 2626-2006 Respiratory protective equipment Self-priming filter particulate respirators GB/T 32610-2016 Technical specifications for daily protective masks

Instrument characteristics:

1. Imported high-precision digital differential pressure gauge. 2. Imported high-precision digital flowmeter. 3. The mask breathing resistance tester can be set with two modes of exhalation detection and inhalation detection.

DRK206 Mask gas exchange pressure difference

Technical parameter	
Gas source	Suction
Air flow	8L/min
Sealing method	Face seal
Specimen breathable diameter	Φ25mm
Differential pressure sensor range	0～500Pa
Display method	Digital display pressure difference
power supply	AC220V, 50Hz.

Features:

1. It is suitable for measuring the gas exchange pressure difference of medical surgical masks, and also can be used to measure the gas exchange pressure difference of other textile materials. 2. The suction air source is used as the power source of the instrument, which is not limited by the space of the test site; 3. It is equipped with a high-precision pressure difference sensor, which digitally displays the pressure difference between both sides of the sample; 4. The special sample holder ensures that the sample is firmly clamped .

Standard:

YY 0469-2011 / YY 0969-2013 / EN 14683:2014 Medical face masks -Requirements and test methods

DRK-308B Protective clothing impermeability tester

Technical parameter	
Diameter of specimen chuck	113mm
Water pressure area of sample	100 cm2
Measuring range	5kPa~700kPa
Water pressure rise rate	1kPa~200kPa/min digital setting
Display method	Liquid crystal display pressure value and rising rate; resolution: 10Pa
Five working modes	Pressurization, constant pressure timing, constant pressure timing, deflection relaxation, water seepage, water leakage, etc.
Shape and weight	550mm×400mm×600mm; about 50kg
Power supply: AC220V	Power: 200W
Instrument configuration	One host, one test pressure plate, two sealing rings, one 500ml measuring cup, Chinese instruction manual

Product description

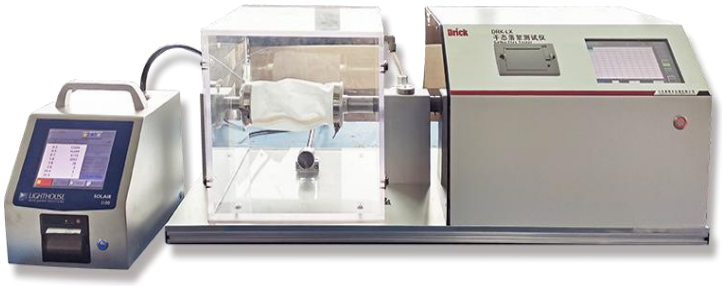
The DRK308 protective clothing water impermeability tester is a new type of instrument designed and developed using high-precision pressure sensors, high-speed and high-precision 16-bit ADCs and microcomputers to determine the impermeability of various textiles. The instrument has the characteristics of wide measuring range, high test accuracy, small size and convenient use.

Standard

GB19082-2009 Technical requirements for medical protective clothing YY-T1498-2016 Guide for selection of medical protective clothing

GB/T4744 "Textile Impermeability Tester" FZ/T01004, ISO811, AATCC 127, etc.

DRK-LX Gelbo flex tester



The DRK-LX Gelbo fiex tester measures the amount of fiber waste of non-woven fabrics in a dry state according to the ISO9073-10 method. It can be used for dry flocculation experiments on raw non-woven fabrics and other textile materials.

Product contains

1. With torsion chamber and air collector; 2. Cutting template (285mmX220mm); 3. Hose (2m); 4. Pattern installation fixture; 5. With particle calculator; 6. Inlet probe and adapter; 7. Sample Fixture: 82.8mm (ø). One end is fixed and one end can be reciprocated; 8. Test sample size: 220±1mm*285±1mm (special cutting template is available); 9. Twisting speed: 60 times/min; 10. Twisting angle/stroke: 180o/120mm; 11. Effective range of sample collection: 300mm*300mm *300mm; 12. Laser particle counter test range: collect samples of 0.3-25.0um; 13. Laser particle counter flow rate: 28.3L/min, ±5%; 14. Sample test data storage: 3000; 15. Timer: 1-9999 times;

Optional measurement channel

3100+: 0.3, 0.5, 1.0, 5.0, 10.0, 25.0 μm

5100+: 0.5, 1.0, 3.0, 5.0, 10.0, 25.0 μm

3100+(CB): 0.3, 0.5, 0.7, 1.0, 3.0, 5.0, 10.0, 25.0μm

5100+(CB): 0.5, 1.0, 2.0, 3.0, 5.0, 7.0, 10.0, 25.0μm

Test principle	The sample undergoes a combined action of torsion and compression in the test chamber. In this twisting process, air is drawn from the test box, and the particles in the air are counted and classified with a laser dust particle counter.
Applications	• Non-woven fabric • Medical non-woven fabric
Product Standards	• ISO 9073-10 • INDA IST 160.1 • DIN EN 13795-2 • YY/T 0506.4
Product selection	Most specifications of particle counters (choose according to customer requirements) 1. Sample cutting template; 2. Constant velocity air inlet probe and adapter; 3. Hose; 4. Sample installation fixture; 5. Particle counter recording paper roll; 6. Sample holder ; 7. Guide pin PTFE bushing; 8. High efficiency air particle filter; 9. Twist pin bushing
Electrical connections	Host: 220/240 VAC @ 50 HZ or 110 VAC @ 60 HZ (customized according to customer needs) Particle counter: 85-264 VAC @ 50/60 HZ

DRK-1000A Anti-bloodborne pathogen penetration tester

The DRK-1000A anti-blood-borne pathogen penetration tester is designed for the penetration test of medical protective clothing against blood and other liquids; the hydrostatic pressure test method is used to test the penetration ability of protective clothing materials against viral blood and other liquids. Used to test the penetration resistance of protective clothing to blood and body fluids, blood pathogens (tested with Phi-X 174 antibiotic), synthetic blood, etc. It can test the anti-liquid penetration performance of protective equipment including gloves, protective clothing, outer covers, coveralls, boots, etc.

Technical parameter	
Pressure method	Automatic adjustment
Sample size	75×75mm
Clamp torque	13.6N.M
Pressure area	28.27cm²
Negative pressure range of negative pressure cabinet	-50~-200Pa
High efficiency filter filtration efficiency	Better than 99.99%
Ventilation volume of negative pressure cabinet	≥5m³/min
Data storage capacity	5000 groups
size	Host size: (length 1180 * width 650 * height 1300) mm; bracket size: (length 1180 * width 650 * height 600) mm, height adjustable within 100mm
Total Weight	About 150kg

Features

1. Negative pressure experiment system, equipped with fan exhaust system and air inlet and outlet high-efficiency filters to ensure the safety of operators; 2. Industrial-grade high-brightness color touch screen; 3. U disk export historical data; 4. Pressure point addition The pressure method adopts automatic adjustment to ensure the accuracy of the test.

Standard

ASTM F 1671-2007: Standard test method for impermeable materials used by blood-borne pathogens on protective clothing using Φ-X174 phage penetration rate as the test system

DRK-506 Meltblown cloth particle filtration efficiency PFE tester

The main parameters	Range	Resolution	Maximum allowable error
Test flow	(5～100) L/min	0.01L/min	±1%
Pressure detection range	(0～2500)Pa	0.1Pa	±1%
Concentration detection range	(0.001～100)μg/L	0.001μg/L	
Detection accuracy	1% of reading value in the range of 0.01% to 100%		
Test repeatability	5% of reading value in the range of 0.01% to 100%		
The median diameter of salt aerosol particles (CMD)	(0.075±0.02) μm		
Oily aerosol particle number median diameter (CMD) (optional)	(0.185±0.02) μm		
Test area	100cm²		
Particle size display	@≥0.3um		
screen display	Computer PC control Lenovo control		
Material	stainless steel		
Operating temperature	20±5℃		
Instrument noise	<60dB(A)		
power supply	AC220V±10%, 50Hz		
Host size	(Length 700×Width 720×Height 1450)mm		

Features

1. The PFE tester for particle filtration efficiency of medical surgical masks is equipped with a dedicated salt aerosol generator, which can generate aerosols of specific particle size and concentration. For tests that require high-concentration aerosols, using 0.3um PSL standard particles, the main particle size range ≥0.3um, accounting for more than 70% of the total, can produce aerosols continuously and stably. Provide test particles to the upstream of the filter material; 2. Equipped with multiple series of special fixtures, suitable for the detection of various masks. The clamp is mainly made of stainless steel to be used for the compression and sealing of the tested filter material; 3. Computer control and software operation, equipment Circuit control and operation, software calculation and data processing, upstream concentration stability judgment, operation control, parameter setting.

DRK-101 Medical mask protective clothing comprehensive testing machine

Technical parameter	
specification	200N (standard) 50N, 100N, 500N, 1000N (optional)
Precision	Better than 0.5 level
Force resolution	0.1N
Deformation resolution	0.001mm
Test speed	0.01mm/min～500mm/min (stepless speed regulation)
Sample width	30mm (standard fixture) 50mm (optional fixture)
Sample clamping	Manual (pneumatic clamping can be changed)
Itinerary	700mm (standard) 400mm, 1000mm (optional)

Standard:

GB 19082-2009 "Technical Requirements for Medical Disposable Protective Clothing" ; **GB 2626-2019** "Respiratory Protective Equipment Self-priming Filtered Particle Respirator" ; **GB/T 32610-2016** "Technical Specification for Daily Protective Masks" ; **YY/T 0969-2013** "Disposable Medical Masks"; **YY 0469-2011** "Medical Surgical Masks" (5.4.2 Mask Band); **GB/T 3923.1-1997** "Determination of Fabric Breaking Strength and Breaking Elongation" (Strip Method); **GB 10213-2006** "Disposable Rubber Examination Gloves" (6.3 Tensile Performance)

DRK-641 Mask temperature and humidity pretreatment box

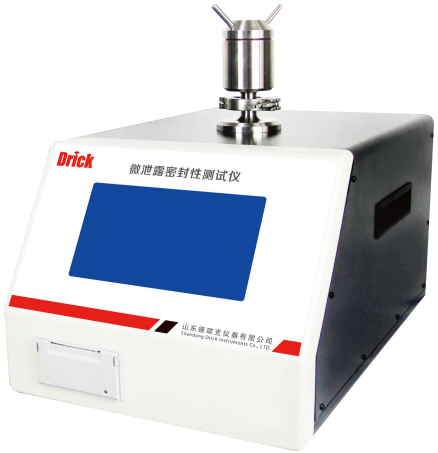
Technical parameter		
Specification model	Product name	High and low temperature damp heat test chamber
	Product number	DRK641 (100L)
	Studio size mm	400×450×550 (D×W×H)
	Outer size mm	930×930×1600 (height includes bottom corner wheel and fan)
Product structure	Single box vertical	
Technical parameter	Temperature range	-40~150℃
	Temperature fluctuation	≤±0.5℃
	Temperature uniformity	≤2℃
	Heating rate	3～5℃/min (average)
	Humidity range	-20%～98%R.H
	Humidity fluctuation	3%～4% R.H
Material	Outer box material	Electrostatic spraying of cold rolled steel
	Inner box material	SUS304 stainless steel
	Insulation Materials	Superfine glass insulation wool

A new generation of constant temperature and humidity box company has many years of successful experience in cabinet design. Based on the humanized design concept, we will try our best to meet customer requirements in every detail from the actual needs of customers, and provide customers with high-quality constant temperature and humidity products. .

This test equipment prohibits: the test and storage of samples of flammable, explosive, and volatile substances; the test and storage of corrosive substances; the test or storage of biological samples; the test and storage of samples of strong electromagnetic emission sources.

Standard: GB/2423.1; GB/2423.2; GB/2423.3; GB/2423.4

Micro leak tightness tester



Technical parameter	
Vacuum	0--100kPa
Detection sensitivity	1-3um
testing time	30s
Equipment operation	Comes with HM1
Internal pressure	Atmospheric
Test system	Dual sensor technology
Source of vacuum	External vacuum pump
Test cavity	Customized according to samples
Applicable Products	Vials, ampoules, prefilled (and other suitable samples)
Detection principle	Vacuum attenuation method/Non-destructive testing
Host size	550mmx330mm320mm (length, width and height)
weight	20 Kg
Ambient temperature	20℃-30℃

Leading the development of the industry. The corresponding test chamber can be selected for different test samples, which can be easily replaced by users. In the case of satisfying more types of samples, the user's expenses are minimized, so that the instrument has better test adaptability. The non-destructive testing method is used to detect the leakage of the packaging containing the medicine. After the test, the sample is not damaged and does not affect normal use, and the test cost is low; it is suitable for detecting small leaks, and can also identify large leaks samples, and give qualified and Unqualified judgment; test results are non-subjective judgments. The test process of each sample is completed in about 30S, without manual participation, to ensure data accuracy and objectivity; brand vacuum components are used, with stable performance and durability; with sufficient passwords Protection function, divided into four levels of authority management, each operator has a unique combination of login name and password to enter the instrument operation; data local storage, automatic processing, statistical test data functions that meet GMP requirements, and export in an unmodifiable and deleteable format , To ensure the permanent preservation of test results; the instrument comes with a micro-printer, which can print complete test information such as equipment serial number, sample batch number, laboratory personnel, test results, test time, etc.

Thanks

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