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Agriculture Equipment



Soil Analysis



TPY SERIES SOIL NUTRIENT ANALYZER

TPY Series, Soil Nutrient Analyzers are bench-top devices used by government functions, research institutes, farmers in both laboratory and farmland. It test N, P, K, EC, pH, moisture content, organic matter, medium and trace elements in soil with precision, accurate result. The TPY Series devices display Ammonium nitrogen, Available phosphorus, Effective potassium content, and provide guidance for how much fertilizer to soil is suggestible for specific kinds of crops.

Specifications

Soil Nutrient

- Stability: Absorbency of light drift <0.003
- Repeatability: Absorbency of light <0.005
- Linearity errors: red light for Copper sulfate, and blue light for potassium bichromate < 3.0%
- Sensitivity: Red light $\geq 4.5 \times 10^{-5}$, Blue light $\geq 3.17 \times 10^{-5}$
- Wavelength range: Red light $620 \pm 5\text{nm}$, Blue light $440 \pm 5\text{nm}$
- Anti-Knocking performance: qualified

Soil pH

- range: 1-14
- Error: ± 0.1

Soil Salinity

- range: 0.01% -1.00%
- Error: $\pm 5\%$

Soil Moisture

- range: 0-100% (m^3/m^3)
- Accuracy: $\pm 2\%$

◆ TPY-6A, TPY-6PC, TPY-7PC

Basic type, yellow color, is a device to test one sample at a time, built-in the amount of nutrients needed for growth of 73 kinds of crops, with printer and local-storage capacity: 1000data. The printing documents shows detecting time and date, crops, fertilizer type, item value, fertilizer suggested value and etc.

Interface: USB, Power supply: 220V-240V, 50Hz, adapter: 12V/3A, device size: 32*28*11cm, Net weight: 6.5kgs



TPY-6A

Measure N, P, K, EC, pH, OM, basic type

TPY-6PC

Measure N, P, K, EC, pH, OM, with Software

TPY-7PC

Measure N, P, K, EC, pH, OM, Moisture, with software

◆ TPY-8A, TPY-16A

Gray color, is a device to test bulk samples at a time, built-in the amount of nutrients needed for growth of 100 kinds of crops, with clock chips, GPRS, The EC sensor is solid state sensor that can test the value by just inserted into soil, very quick and easier to operate. Besides the standard parameters, 7inches LCD touch screen, Android operation system, Interface: Wi-Fi/GPS, with prinfer and local-storage capacity: 200000data. Power supply: 110V-240V, 50Hz, adapter: 12V/3A, device size: 32*28*11cm, Net weight: 6.5kgs



TPY-8A

Measure N, P, K, EC, pH, OM, 8 samples at a time



TPY-16A

Measure N, P, K, EC, pH, OM, 16 samples at a time

◆ TPY Pro

Upgraded type, a comprehensive intelligent device to detect available nitrogen, available phosphorus, available potassium, total nitrogen, total phosphorus, total potassium, organic matter, pH, and salt content in the soil. The content of various medium and trace elements in the soil such as calcium, magnesium, sulfur, iron, manganese, boron, zinc, copper, chlorine and silicon.



MULTIPLE PARAMETER SOIL METER

The Multiple Parameters Soil Meter is made up of a Data Logger and soil sensors. The sensor includes soil moisture, temperature, EC, pH, N, P, K, with GPRS and network, all data could be displayed on the cloud platform in real-time.



Features and Benefits

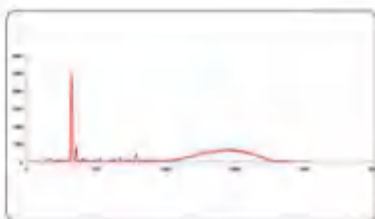
1. Wireless communication: Data is online displayed on cloud platform and mobile APP in real-time through 2G/4G.
2. LCD Screen, it displays the current date and time, the measurement data of each sensor, the number of stored data, and etc.
3. Data Collection methods: Automatic and manual
4. With GPS positioning function
5. Large storage capacity: nearly 30,000 data could be stored on Data Logger, plus a standard 4G memory
6. Lithium battery power supply: 7.4V 2.8Ah lithium battery, with charging protection, low voltage prompt function.
7. Low power consumption design, with system monitoring and protection measures to avoid system crashes;
8. Working temperature: -40-80℃

Technical parameters of Sensors

Soil pH	range:0-14	Accuracy:±0.5	
Soil Temperature	range:-40-80℃	Accuracy: ±3℃	Resolution: 0.1℃
Soil Moisture	range:0-100%	Accuracy: ±3%	Resolution: 0.1%
Soil EC	range:0~23mS/cm	Accuracy: ±2%	Resolution: 0.01mS/cm
Air Temperature	range:-40-80℃	Accuracy: ±0.4℃	Resolution: 0.1℃
Air Humidity	range:0-100%RH	Accuracy: ±3%RH	Resolution: 0.1%RH
Dew Point	range:-40-50℃	Accuracy: ±0.4℃	Resolution: 0.1℃
Soil N, P, K,	range:0-1999mg/kg	Accuracy: ±2%FS	Resolution: 1mg/kg

SOIL HEAVY METAL METER

◆ TPJS-B Advanced type



- Wide range of application areas**
Field Soil, Sand, sludge, solid waste, mud etc.
- Quick test**
No sample required, but analysis the soil directly in 80 seconds
- sample type**
recognized automatically
- High measurement accuracy**
Directly display % of elements and PPM content
- 3D map of elements content can be build**
Build-in GPS position system, GIS software can be uploaded through coordinates and altimeter to evaluate the area of environmental disaster.
- Date can be networked, device can be remote controlled**
USB, Bluetooth, Wi-Fi available.
- Data never lost**
Cloud service available. All data can be uploaded to cloud.
- Device warning**
Working environment: $-20\sim 50^{\circ}\text{C}$, device will alert when the temperature is out of range.

- 34 elements can be measured**
K, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Ag, Cd, Sn, Sb, W, Re, Pd, Au, Hg, Pb, Bi, Cs, Ba, Th, U

High sensitivity silicon drift detector:	accuracy: $<125\text{ eV}$
Display system:	4:3 screen; the brightness be adjusted according to external environment.
Data processing:	build-in 32Gmemory, 300K spectral data and graph can be stored.
Dimensions of device:	254*79*280mm(L*W*H)
Net Weight:	1.8kg (include the battery)

◆ TPJS-A Advanced type

Elements can be measured: Pb, Cd, Hg, As, Cu, Cr6+, Al, Zn and etc. The detecting time is quick and less than 120seconds. Supporting consumables with low dosage and low toxicity, the operation is easy and convenient.



SOIL HEAVY METAL METER

◆ SDT-60

3-11 PH

pH range

$\pm 0.2\text{PH}$

pH accuracy

1-8%

Moisture range

$\pm 1\%$

Moisture accuracy

6cm

Depth



SOIL PROFILE METER

◆ TPGSQ-4

The Soil Profile Meter is a device to monitor soil water profiles and soil temperature in all soil types, with minimal influence from either salinity or temperature. TPGSQ-4 measure soil moisture at four depth levels down to 70cm or deeper to 200cm, the depth could be customized according to customer needs.



Higher waterproof level
Ip67. Is able to be installed on farm for a long-time measuring.



Three ways of power supply
Solar power, AC 220V, or Li-Ion power



Network connection
Rs485 or GPRS connection, it is able to view the data in real time on web page and APP



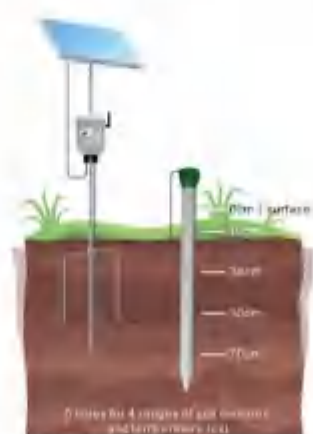
Anti-theft function
When there is vibration, removal and other external force operations, the APP will automatically alarm



Data display in different way
report, curve, and history data



Measuring depth
Max. 70cm (customized is acceptable)



Soil Moisture

range: Dry soil–water saturated soil 0–100%

accuracy: $\pm 3\%$

Soil Temperature

range: $-20 \sim 70^{\circ}\text{C}$

accuracy: $\pm 0.5^{\circ}\text{C}$

DIGITAL SOIL WATER POTENTIAL METER

◆ TRS-II

Features and Benefits

1. High accuracy and high resolution can test soil temperature and water potential at the same time.
2. Easy to operate, portable, flexible, can purchase one set with multi-probes.
3. Automatically get the peak data of water potential
4. With time set, full scale set auto save function
5. Record temperature, water potential, time and storage No at the same time
6. Automatically turns off function



Max load

100kpa

Soil Temperature testing range

$-55^{\circ}\text{C} \sim 150^{\circ}\text{C}$

Resolution

0.01kpa

Temperature accuracy

± 0.5

Accuracy

± 1

Probe quantities

5probes

SOIL TESIOMETER

◆ TEN series

Soil tensiometer is made up of Bar gauge, acrylic tube and ceramic probe, the tensiometer is a simple, versatile, and inexpensive instrument which provides a direct measurement of soil water tension. The modular design allows easy replacement of the ceramic probe and gauge, and addition of extension tubes. It is widely used in Soil Moisture Sensing, Soil Water Retention, Irrigation Management and Soil Physics.



Testing range: 0-1 Bar (1 Bar = 100 Kpa)

Tube Length: 15cm

TEN-15

Tube Length: 50cm

TEN-50

Tube Length: 30cm

TEN-30

Tube Length: 90cm

TEN-90

Tube Length: 45cm

TEN-45

Tube Length: 100cm

TEN-100

Tube Length: 60cm

TEN-60

Tube Length: 120cm

TEN-120

DIGITAL SOIL HARDNESS TESTER (DIGITAL HAND PENETROMETER)

The Soil Hardness Tester, is a portable device that measures the resistance of soil easily by pushing a cone vertically into the profile scrapped evenly. Digital display the measured values. Anyone accurately readable.

Features and Benefits

1. LCD display with backlight function.
2. Battery capacity display.
3. Peak value maintaining function: maintain the peak value display until clear the value manually.
4. Automatic peak function.
5. Large memory storage function: 5000 Data (TYD-2), 30000 Data (TJSD-750).
6. Data output function, data can be uploaded to the computer for various analysis.
7. Shut-down automatically: If there is no key operation for long time, the data logger will be automatically shut down.
8. High quality charging power; 100-240v of charging voltage can be available
9. Range 0-100kg (N, kg, Lb units available). Resolution: 0.01Kg. Accuracy: $\pm 0.5\%$.
10. Long battery continuous operation time : 6-8hours.
11. Data transmission to computer and data export.



TYD-2

White Color Measuring Depth 0-450mm



TJSD-750

Orange color Measuring Depth 0-375mm
with GPRS, RS485/4G network

SOIL AGGREGATE STRUCTURE ANALYZER

◆ TPF-100

Soil Aggregate Structure Analyzer is special wet sieving equipment that sorts the water-stable soil aggregates by size. The soil aggregate stability is a comprehensive way for soil quality and soil healthy measurement.



Host size: 512mm * 512mm * 760mm

Stroke: 50mm

Timing range: 0-60minutes

Rotate speed: 1350rpm

Sieve frequency

4-45times / minute

Max power

120W

Working voltage

AC 220V $\pm 20\%$ 50HZ

SOIL SOLUTION SAMPLER

The Soil Solution Sampler is used for further chemical analysis and monitoring salt and nutrient movement in the root zone. The sampler draws moisture from the surrounding soil and stores it in an inert ceramic cup for collection and analysis.



Features and Benefits

1. It adopts the advanced negative pressure suction and 31 mm large ceramic head, it can sample quickly.
2. Extract the solution from inside the pipe under positive or negative pressure.
3. Continuous using is available; it also can be used repeatedly in different places as well.
4. Don't need decompose earth, thus it will not destroy the soil structure.

SOIL BULK DENSITY METER

Soil bulk density meter adopts cutting ring method to measure the dry mass of soil per unit soil volume (g/cm, sup>3) and thus includes the combined volume of solids and pores that may contain gases or water, or both.

Accessories

2 ring cutters, 2 ring cutter press blocks, 1 directional cylinder, 1 guide rod, 1 drop hammer, 2 knobs



SOIL SAMPLER (SOIL AUGER)



Pointed head, Stainless steel, Not detachable, sampling depth: 100cm, Scale: 10cm, the diameter of head: 6cm



Spiral head, 304SUS, detachable, sampling depth: 100cm, scale: 10cm, the diameter of head: 6cm



Soil Sampler kits, the whole set includes: 2-4pcs Tubes, head, handle, brush, spanner, meters Tape, scraper, portable case. Sampling depth: 1m, 1.5m, 2m



Soil Sampler for root research. The root auger is used to take undisturbed samples for root investigations in soils with low penetration resistance. Maximum sampling depth: 100 cm

TPLQ-1P

1m depth
Pointed head

TPLQ-1S

1m depth
Spiral head

TPLQ-2

2m Depth
Soil Sampler kits

TPLQ-1R

1m depth
Soil Sampler for root research

LABORATORY SOIL GRINDER

◆ TPYM-100G / 50G

The soil grinder is a laboratory grinding machine that can be used to grind various types of soil samples. It can quickly disperse and grind the collected soil to a specified particle size, which is convenient for subsequent detection and analysis. It can be widely used in soil analysis, soil research and other work.



Technical Parameters

ample size	≤5um	Pause time settin	1-999min
Minimum processing volume	50ml/can	Ball mill carrier material	stainless steel, agate, zirconia, corundum, tungsten carbide, polyurethane, etc (optional).
Maximum capacity	4x100ml	Carrier volume	50ml-100ml general purpose
Main disc speed	50-4000/min	Ball milling media material	optional stainless steel, agate, zirconia, corundum, nylon, PTFE
Ball mill rotation speed	100-800/min	Medium diamete	10/5/10/15/20mm
Transmission ratio (planetary disc/ball mill jar)	1:2	Medium mass	100-400g
Continuous running time setting	1-999min	Grinding method	with and without grinding

Seed Analysis

AUTOMATIC SEED COUNTER

Seed Counting machine is widely used in seed industry and particle packing, it is able to automatically count grains and particles includes but is not limited to: crops seeds, vegetables seeds, feed, diamond, capsules, tablet and others size of particles. There are two types of counting machine are supplied: General type SLY-C plus and SLY-F.

◆ SLY-C plus General Type

Feature and Benefits

1. Two modes: Free and bulk count
2. The counting speed is adjustable
3. The speed gets lower when the last particles remains to be counted
4. High accuracy: Sensitivity levels for different size of particles, so that the counting time is minimized and a high degree of counting accuracy is achieved
5. Automatic motor Protection: the motor will stop work once it detects there is no particles on the plate for 60seconds
6. User-friendly interface: LCD screen, mode selection, counting time, level and number of particles display clearly
7. Widely application: suitable for particles includes but is not limited to: crops seeds, vegetable seeds, feed, diamond, tablet



Sample Size	small and middle sample:0.7-4mmx0.7-12mm Big sample:3-10mmx3-12mm	Noise	<70db
Count Accuracy	± 2%	Power	AC110V /60Hz and AC 220V /50Hz
Count Speed	> 1000 /3min (Sesame)	Continuous working time	> 5Hr
Counting Range	1-99999	Size of Machine	285*210*170mm
Bulk Counting	1-99999	Operation Environment	-10℃-50℃, <85% RH

◆ SLY-F Advanced Type with Dividing Function

Feature and Benefits

1. Two modes: Total count and batch count
2. 7-inch color touch screen, it shows an intelligent dynamic screen to guide operation process, with automatic seed dividing function
3. Automatically Seed dividing: The amount of cups and the amount of grains of each cup can be set
4. Seed name, seed size and vibration strength, cup no, counting time, work status and others status are displayed on LCD while counting
5. Adjustable knob provided on Pan to ensure that the seeds move in a single row
6. The speed reduce lower when the last particles remains to be counted
7. High accuracy: Sensitivity levels for different size of particles;
8. 20 kinds of Seed species can be set
9. Printing and data transmission, the system be upgraded remotely
10. Automatic motor Protection: the motor will stop work once it detects there is no particles on the plate for 60seconds;
11. User-friendly interface: LCD screen, mode selection, counting time, level and number of particles display clearly
12. Widely application: suitable for particles includes but is not limited to: crops seeds, vegetable seeds, feed, diamond, tablet



Count Range	Length 1-23mm	Power	AC110V /60Hz and AC 220V /50Hz
Count Accuracy	± 2%	Continuous working time	> 8Hrs
Count Speed	> 1000 /3min	Size of Machine	730*365*470mm
Counting Range	1-9999	Operation Environment	-10℃- 50℃, <85% RH
Bulk Counting	1-9999	Net Weight	46kgs
Noise	<70db		

GRAIN MOISTURE METER

◆ LDS series

The grain moisture meter is a portable device suitable for measuring the moisture and temperature of different grains, is ideal for determining important indicators of grain storage and quality, high moisture, especially when paired with high temperatures, increases the risk of mould, mycotoxins, and insect infestation. Very easy to use.

Specifications

Measured object: grain and other nonmetal particle samples such as paddy, wheat, corn, bean, rapeseed vegetable seeds etc.

Measure range: 3%~35%

Ambient temperature range: 0~40℃

Measure error: $\leq \pm 0.5\%$ (main moisture range)

Power: 4 x AA Batteries and DC 9V power adapter

Repetitive error: $\leq 0.2\%$

Display: highly bright poor light LCD



LDS-1H

Mainly used for field crops: rice, bean, wheat, rapeseed, corn, barley etc.

LDS-1S

Mainly used for: tomato, eggplant, turnip, and other vegetable seeds etc.



LDS-1G

Also measure volume-weight, mainly used for crops: rice, bean, wheat, rapeseed, and etc.

◆ DHS-16A

Ring quartz tungsten halogen infrared heating source, quick drying of samples, in the drying process, the moisture content lost by the sample is continuously measured and displayed immediately. After the drying procedure is completed, the final moisture content value is locked. It can fully meet the requirements of moisture testing in areas like food, medicine, tobacco, paper making, chemical and mineral industry and so on.



Measuring accuracy	0.01%	Heating temperature range	50℃~180℃
Measuring range	0.01~100%	Heating source	halogen lamp
Weighing range	0~50g	Display parameters	moisture, time, temperature, weight
Heating time	0 min~99 min	Output interface	standard with RS232 Output interface—convenient connection to printers, computers and other peripheral equipment, in line with FDA/HACCP format requirements
Sensor accuracy	0.001g	Power	220 V/50Hz
Moisture measurement accuracy	$\pm 0.5\%$	Frequency	50Hz $\pm$ 1Hz
Weighing sensor	high-precision heat insulation sensor	Scale size	diameter 100 (mm)

SEED DIVIDERS

The Seed Divider is used for dividing seed sample into two equal halves.

◆ LXFY-II Centrifugal Seed Divider

It is used for dividing and mixing grain samples and performs accurately on all grains, seeds feed, etc. Sample division and mixing are carried out by centrifugal action of motor-driven, revolving neoprene disc positioned under the hopper. Smooth inside finish virtually eliminates any of the samples sticking to inner surfaces. The sample falls from the hopper onto the revolving disc and evenly splits into two smaller equal halves.



Size 26*30*51cm
Hopper capacity 2 kg
Work error $\leq \pm 0.5\%$ per kg

Power AC 220V 50HZ
Packing list One unit of host and 3 units of sample holders

◆ JFYZ series Stainless Steel Boerner Seed Divider

The Boerner divider is operated mechanically & on gravity principle, the sample is placed in the hopper and released by moving a slide gate under the hopper. After initial separation, the grains rejoined into two cones, which release out of the bottom hopper. The divider is made up of stainless steel which is rust-resistant. And supplied with two stainless steel pans.



JFYZ-A-II

Capacity: 2000g, 36 Chutes

JFYZ-B-II

Capacity: 500g, 30 Chutes

◆ Stainless Steel Riffle Divider

The Riffle Divider is used for halving dry materials. As the product is poured into the hopper, it is divided into two equal portions by a series of chutes which discharge alternately in opposite directions. The divider is made up of stainless steel which is rust-resistant.



HGG



HGT

HGG-I / HGT-I

16chutes, width of chutes 12.7mm, capacity 150-1200g

HGG-II / HGT-II

12chutes, width of chutes 25.4mm, capacity 300-2000g

VACUUM SEED COUNTER & PLACING APPARATUS

The Vacuum Seed Counter is an extremely practical device that facilitates the tiring and time-consuming counting and uniform depositing of seed for germination. It is particularly suitable for seeds being regularly shaped and relatively even, such as grain. The seed counter consists of three main components, a vacuum system with a connection hose, a number of counting heads corresponding to the different seed sorts, and a valve to dissolve the vacuum. The vacuum capacity can be adjusted by a potentiometer. The counting heads with 100, and 25 boreholes are some smaller than the germination paper. The diameter of the holes is adapted to the size of the seed and the suction capacity of the vacuum. max noise: 69dB

The counting heads (suction plates *5pcs):

12*8.8 (25holes, for corn, 1pc) 15.7*12 (100holes 1pc) 10.3*10.3 (100 holes, 2pcs) Ø8 (100 holes /pc)



ZLC-2000

Portable type, 1200W
 AC220V 50HZ



SZC-50

Bench-top, 1440W
 AC220V 50HZ

TJD SERIES ILLUMINATED PURITY WORKBENCH

The Purity Workbench is used to aid the analyst in critical inspection and separation of seed and grain samples. A Long-lasting light source is provided beneath a smooth opal white glass surface and a magnifier with light to illuminate the working sample. A removable drawer is located in the front for storage or collecting from the sample. Solid hardwood veneer construction makes this model a durable, long-lasting asset to any lab.

◆ TJD-800

Magnification: 0-7X
Illumination power: 20-30W
Power: 220V, 50HZ
Net weight: 8KG



◆ TJD-900

Magnification: 0-7X
Power: ≤30W
Surface size: 320 * 320mm
Table base size: 930 * 330mm
Luminous panel size: 260*260mm



◆ TJD-1300A

Magnification	0-7X
Machine Size	130 * 65 * 75(cm)
Magnifier light power	20W
Observation table size	63 * 50(cm), power: 15W
Polarized light platform Size	27*27(cm), power: 16W
Accessory	Manual counter, grain-counting board



CFY SERIES ELECTRIC SEED BLOWER

The seed blower serves for quick and easy separation of light and heavy seed; it utilizes airflow, which is generated by a blower motor and as that air passes through the column, the air lifts light fluffy material or empty seed hulls into the top beveled area of the column, while larger heavier good seed stays at the bottom, AC220V, 50HZ, AC 110V Transformer is acceptable.

◆ CFY-2

the basic and economical type

Max air volume: 2.31m³/min
Max wind pressure: 785pa
Noise: ≤60db
Timing: 0-10min
Power: 160W



◆ CFY-3

for large seeds (e.g., wheat and rice)

Max air flow: 0.976 m³/min
Max wind pressure: 689pa
Max wind speed: 33.2m/s
Noise: ≤81dB
Timer: 0-9999min
Motor speed: 2800 r/min, 550W
Cup mesh: 28
Size: 526mm*455mm*1686mm



◆ CFY-4

for small seeds (e.g., sesame)

Max air flow: 0.220 m³/min
Max wind pressure: 785pa
Max wind speed: 7.80m/s
Noise: ≤70dB

Size: 350mm*350mm*900mm
Timer: 0-9999min
Motor speed: 2600 r/min, 90W
Cup mesh: 40



HY SERIES SEED X-RAY MACHINE

The X-ray Machine is used for penetrate seeds such as corn, rice, cereal straw, Chinese fir, pine seed, chestnut, rape and so on. It can also see the development, size, shape and quality of inner pest canter cavity and germ.

◆ HY-1180 Agricultural X-ray Machine

Application

Small animal in vivo im aging: such as phenotype, bone regeneration, tumor growth, osteoporosis/orthopedic research, angiography, lung research.

Oral research: dental imaging, dental model denture imaging, dental imaging, contrast imaging of small animal limbs. Pre-screening Micro-CT to shorten the experiment time.

Seed im aging: Checking seed viability, contamination, parasite infestation.

Marine fishim aging: fish bones, fish, etc.

Non-destructive testing: printed circuit boards, automotive parts, aerospace parts, medical equipment, electrical/mechanical parts, injection molds, castings, gemstone inspection.



Technical Parameters

1. Don't require additional radiation protection configuration.
2. Stainless steel liner for easy cleaning.
3. Under the full load of the system, the X-ray leakage dose on the surface of the cabinet meets the national standard.
4. One-button exposure operation, easy to operate.
5. Configure professional image processing software.
6. Create independent storage files and save experiment setup data.
7. The image can add false color marks to the key parts of the detected image for easy observation.
8. Experimental results can be saved and printed.

Voltage:	50KV	Maximum detectable area:	160mm*130mm
Nominal focus size:	35um	Power supply:	90-240VAC, 50/60Hz
Typical image acquisition time:	10 seconds	External dimensions:	L500mm*W400mm*H900mm
Detector pixel size:	139um		

◆ HY-1080 Agricultural X-ray Machine

Application

X-ray can display the internal structure of seeds directly. It can display the full seeds, insect pests and empty seeds with little radiation. It can be displayed on the computer, and the photos can be stored in the computer, so the consumables and chemicals for developing the film are omitted.

Characteristics

1. It doesn't require darkroom and can be directly display. When image is in the best effect, captured image can be stored.
2. USB can be used to connect the computer to output high-definition digital image. It can print, analyze, store and call X-ray image directly.
3. Real time image acquisition, real-time imaging, megapixel camera system, including software.
4. Image quality can be adjusted according to seed diameter and image effect can be adjusted on the computer.
5. Intelligent contrast adjustment.



Standard Configuration
Without Aluminum Room



Radiation Protection
Clothing

Camera phasor	> 1.5 million	Tube target sulfur	0.2-0.4m
Photo range	4.80mm	Contrast	7 %
Resolution	56lp/ cm	Gray scale	7levels
Brightness of output screen	> 7CD/cm ²	Leakage ray	5mri/h
Maximum spacing	300 mm	Host weight	6.5kg
Tube voltage	60-85kv		

◆ HY-1060 Agricultural X-ray Machine

Characteristics

1. New design and process technology make it more safe, stable and reliable.
2. Compact and portable, the total weight is less than 10kg.
3. It can conduct comprehensive self diagnosis of software and hardware, and diagnose faulty parts.
4. Strong anti-interference.
5. Use knob to quickly select the exposure parameters, and the operation is very simple. The high voltage rises and falls slowly, which can effectively protect the X-ray generator.
6. Safety lock is set to effectively prevent misoperation.



Input voltage	220V, 50Hz	Exposure time	0 – 5 min
Output tube voltage	10–60kvp	Tube voltage	10–60kv, constant voltage , continuously adjustable
Output tube current	0–5ma automatic	Penetration	8mm –12mm
Cone angle	400	Sensitivity	better than 2%
Focus size	0.8 x 0.8 (mm)	Weight	20kg



Sample



Image

Configuration: Host, Controller, 15m connecting wire, Film and Filmbag

DSX ELECTRIC SIEVE SHAKER

Sieve shakers are used for the separation and size determination of particles. the shaker separates particles by passing them through a series of sieve with mesh filters and agitating the sample in order to obtain a complete separation.

The device is of table structure, the body sieves by three planes struts, makes the plane rotation through the eccentric link motion gear the automatic device to sieve, has the structure compact reasonable, the revolution steady, the performance is stable, merit and so on ease of operation, is widely used for the grain, the fuel oils screening test.



Max sieving quantity range	500g	Rotation speed	115 ± 5r/min
Sieving frame level	3 layers	Sieve diameter	220mm
Sieving range	100mm	Power	60W AC220V 50Hz

SIEVES

Sieves name	Qty of layer	Outer diameter	Height	Sieve opening
Grain Sieves 01	12	Φ200mm	50mm	Φ1.0, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 6.5, 7.0, 8.0, 9.0, 10
Grain Sieves 02	12	Φ220mm	50mm	Φ1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 4.5, 5.0, 6.0, 1.7*20, 12
Corn Sieves	8	Φ200mm	50mm	Φ6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5

JJSG



Corn Sieve



Crop Biometry test and Yield Test

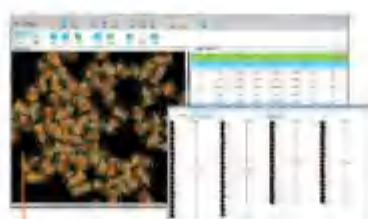


TPKZ SERIES FAST TSW AND SEED BIOMETRY TESTING SYSTEM BY IMAGE PROCESSING

The TPKZ series TSW and seed biometry Testing System is a high-performing, one-step and ready-to-use device for calculating the TSW. Fast, accurate and objective results are obtained by the perfect interaction of 3 elements: a camera with a high resolution depending on the grain size, a laboratory balance and a software for image processing with an algorithm developed. The systems are able to analyze corn of kernels, sections, intact ear, and other crops shape analyzer includes paddy, rice, beans, nuts, sesame seeds and others smooth-surfaced seeds.

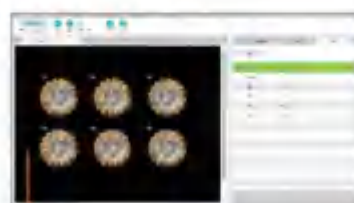
◆ TPKZ-1 (for corn Ear and Kernels analysis)

Measuring contents



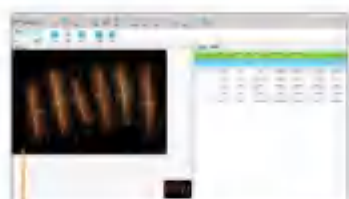
Kernels Analysis:

Kernels quantity, unit weight, kernel size (length, width, aspect ratio, perimeter, area, diameter), moisture, color (RGB), quantity of embryo tips and etc.



Section Analysis:

Kernels per row, axis diameter, axis color, kernel length, kernel width. At least 15 sections can be detected automatically each time.



Intact Ear Analysis:

Ear length, ear width, barren ear tip length, panicle angle, average kernels per row, kernels thickness, section kernels per row, kernels quantify and its average.



Color Analysis

RGB color display. With comparative analysis of sample color.



Scanner with high resolution and color scanner.



Fast Analysis speed

10 ears, 35 sections, 1000 kernels analyzed once.



Embryo tips mark automatically.



Data storage

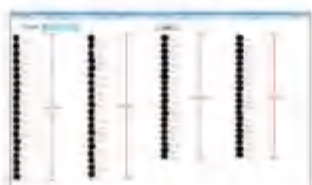
Images, automatic generation of report and export in Excel, supplement stored is available.



Fast Analysis speed

automatic counting error: $\leq \pm 0.3\%$, and reach 100% correct through manual correction;
Kernels size error: $\leq \pm 0.3\%$

◆ TPKZ-3 (Kernel Analysis)



Analysis data export:
the analysis image results can be saved, and the total report can be automatically formed. Analysis results can be output to the Excel table.



It is Suitable for grain type analysis of seeds such as corn, rice, wheat, soybean, rape and vegetable seeds.



Imaging characteristics

10 million pixel resolution color camera with auto-focus, and an ultra-thin backlight light source board.



Counting speed, accuracy and target size

fully automatic counting speed: 1200 ~ 20000 grains/min, the number of grain error $\leq \pm 0.1 \sim 0.4\%$, accuracy error of automatic thousand-grain weight: $\leq \pm 1$ mg.



Each grain shape parameter (length, width, length-width ratio, area and circumference) of various adhesion grains can be automatically measured and sorted out.



Moisture measurement

Through the moisture meter, the data can be input into the software, and finally unified output.



Auxiliary deletion

can select add/delete, or directly use the mouse to manually count on the screen to ensure the personalized count of the 100% correct target area: count the optional range or rectangle range in the work area view.



Automatic input interface with the bar-code of the tested sample and the RFID weight data of the electronic balance. The analysis process is computer control, efficient, accurate, easy to use, counting analysis and thousand-grain weight measurement of one-click operation.



Software encryption



Analysis data export

the analysis image results can be saved, and the total report can be automatically formed. Analysis results can be output to the Excel table.



Backlight device

the ultra-thin backlight plate has the function of adjusting the brightness, and is equipped with a seed tray with automatic calibration function. after laying the seeds, there is no shadow and the grain type is calculated.

◆ TPKZ-2 (Kernel Analysis)

The system is an economical type to count TSW, and analyze the avg area, avg perimeter, avg length, avg width and length-width ratio with image treatment of different crops types, which includes corn, paddy, wheat, sesame, beans, pea nuts, and etc. It is made up of camera, light board and electric balance.



Counting range 50-1500 particles

accuracy ± 0.001 (round size), ± 0.005 (long shape size)

◆ Main Accessories for TPKZ series

④ Camera

Structure	Folding/Telescopic
Lens	Manual focus
Main camera sensor resolution	4000×3000 (12m pixel)
Resolution(optional)	3664×2744, 2592×1944, 2048×1536, 1600×1200, 1280×1024
Shooting Size	A3 and less
Shooting Speed	≤1S
Image format	JPEG, TIFF, BMP, PDF and etc
Image color	RGB24, 16 million full color mode
Image control	Brightness, exposure length, sharpness, color, gain control, etc.
Image mode	Color, grayscale, black and white
Interface Protocol	TWAIN
hardware environment	Pentium 4 or equal, 1G+, At least 300M hard disk space
USB Interface	USB2.0
Software Environment	Microsoft Direct X9.0 above RUNTIME
Supported Operating Systems	Microsoft Windows 2000(SP4), Windows XP(SP2+), Windows 2003, Windows Vista SP1(32/64) or Win 7(32/64)
Connection method	USB2.0
Lighting source	Natural light and built-in new ultra-high LED fill light
Light source control method	Touch
Ambient temperature	0℃-40℃

④ Scanner

Photosensitive element	CCD
scanning method	pad
light source	LED
Resolution	1600 x 1600dpi
Color bits	48bit
Scanning speed	9S(300dpi Color, Grayscale, Black & White, A3) 7S(200dpi Color, Grayscale, Black & White, A3)
Scan range	A3 (304.8mm × 431.8mm)
Button	7个: Scan, OCR, Email, copy, File, Custom1, Custom2
Interface	USB2.0
External Size W×D×H	623 x 400 x 133 mm
Weight	7.5 kg
Interface Protocol	TWAIN
Image processing	Perfect image processing, standard OCR recognition software
Power supply	Adapter 24V/1.25A
Supported Operating Systems	Win7, Win8, Win10



for TPKZ-3



for TPKZ-3

TPKZ-1

Corn ear, kernel analysis,
Scanner+balance+computer

TPKZ-2

Kernel analysis,
phone + Sample plate+ balance

TPKZ-3

Kernel Analysis,
High-accuracy Camera +balance+compute

SERIES HECTO GRAIN TESTER

◆ GHCS-1000 Series

GHCS-1000 Series Hecto grain tester is a specialized instrument to measure the grade of food. It can not only measure millet, wheat, sorghum and other small particles of grain, but also corn, soybeans and other large particles of grain.

This series of volume-weight Meter adopt testing results digital display and automatically printing measurement, electronic weighing technology, with the characteristics of easy operation, high accuracy and high testing speed. It has been an essential instrument for departments of quality supervision, food processing, research, agriculture, breeding, schools, etc. Weight range:100-1000g.



GHCS-1000

SMALL size of particle such as paddy, wheat

GHCS-1000B

BIG size of particle such as corn, sorghum

LABORATORY CROPS THRESHER

Laboratory Thresher is threshing machine used in seed production and development. The machine is used for field and indoor threshing of the plants previously harvested.



QKT-5TY

Corn single ear, AC220V



KTY-380

Corn, Plot, AC380V



TSL-150A

Wheat, Paddy, single ear,
AC220V



QKT-320

Wheat, Paddy, Plot,
AC380V

Plant Phenotype Research

CHLOROPHYLL METER

The Chlorophyll meter is a lightweight handheld meter for measuring the chlorophyll content of leaves without causing damage to plants. It is a compact meter designed to help users improve crop quality and increase crop yield by providing an indication of the amount of chlorophyll present in plant leaves. As the chlorophyll of plant leaves is related to the condition of the plants, and thus can be used to determine when additional fertilizer is necessary, by optimizing nutrient conditions, healthier plants can be grown, resulting in a large crop yield of higher quality.

◆ TYS -B Chlorophyll Meter

Measuring area: 2mm*2mm

Measuring mode: 2-wavelength concentration difference of optical methods

Sensors: Silicon semiconductor photo diode

Memory capacity: 30KB, automatically calculate and show the average

Accuracy: ± 3.0 SPAD; $\pm 0.5^{\circ}\text{C}$



Measuring Range 0.0-99.9 SPAD, $-10\sim 99.9^{\circ}\text{C}$

Repeat ± 0.3 SPAD, $\pm 0.2^{\circ}\text{C}$

Power 4.2V-2000Mah rechargeable Li battery;

Display mode Measuring times: 2 digits liquid crystal display
Measuring value: 3 digits liquid crystal display

Operating temperature $-10\sim 50^{\circ}\text{C}$

Weight 200 grams

Min measuring interval $< 3\text{s}$

◆ SPAD-502PLUS Chlorophyll Meter

Measuring mode: 2 wavelengths optical density difference

Measuring area: 2 mm*3 mm

Sensors: Silicon semiconductor photo-diode

Accuracy Within ± 1.0 SPAD units (for SPAD value between 0 and 50 under normal temperature)

Measuring range: -9.9 to 199.9 SPAD units

Memory capacity: 30 datum, automatically calculate and display average value



Power 2 AA batteries (1.5V)

Battery life More than 20,000 times

Test interval 2s

Display mode LCD, 4 decimal places, tendency chart

Repeatability Within ± 0.3 SPAD units (for SPAD value between 0 and 50)

Reproducibility Within ± 0.5 SPAD units (for SPAD value between 0 and 50)

Working environment $0\sim 50^{\circ}\text{C}$

Other functions alarm; calibration

Size 23*19*11CM

YMJ SERIES PORTABLE LEAF AREA METER

Portable Leaf Area Meter is a highly portable meter ideal for rapid and non-destructive leaf area measurement in any location. Measurements are made easily by sweeping the contact image scanner over a leaf to yield different parameters: area, width, length, perimeter, shape factor, aspect ratio, etc. The researchers can use the meter to make non-destructive measurements on leaves of living plants, enabling data collection on a leaf or plant throughout its life span.

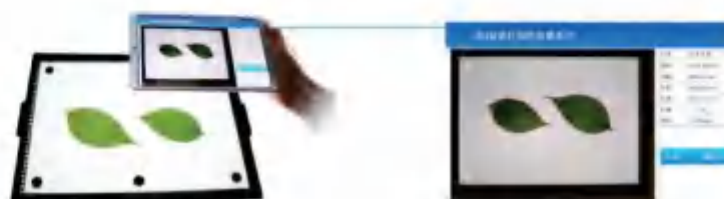
◆ YMJ-A, YMJ-B

Test unit	millimeter, square centimeter
Precision	±2%
Resolution	0.01cm ²
Measuring Length	≤1000mm
Measuring Width	≤160mm
Thickness	≤8mm
Data capacity	≥1000 Groups
Interface	USB 2.0
Power supply	4 AA alkaline battery



◆ YMJ-C Portable Intelligent Leaf Area meter with Image Processing

The leaf area meter is made up of a backlight plate with 4-points calibration, a leaf analysis software, and a mobile phone. It adopts image recognition algorithms technology to analysis the leaf by collecting the leafs characteristics such as color, shape, texture, local features point. After shoot, the researcher is able to fixed the leaf shape to improve a higher accuracy.



Suitable range	varying size of green, yellow, red or other colors for plant leaves.
Measuring range	5~100 cm ²
Measured max length	20cm
Measured max width	15cm
The accuracy for counting worm hole	±2%

◆ YMJ-D Handheld Leaf Area Meter

Test unit	millimeter, square millimeter
Precision	±2%
Resolution	0.1mm
Measuring Length	≤2000mm
Measuring Width	≤213mm
Thickness	≤8mm
Data capacity	5000 Groups
Interface	USB 2.0
Size	36.5*3.8*6.9cm
Power	3.7V Li-ion battery



◆ YMJ-E High Resolution Non-destructive Leaf Area Meter

Advanced leaf area meter that measure the plant leaf without cause damage to plants, it adopts camera collecting the leaf image and analyze leaf with image processing software. For the longer leaves, the meter is able to shoot image bit by bit and stitch all bits in one image, then the software process and analyze the images and give a result. Max length is up to 3meter. 4-points calibration



Feature and Benefits

1. It adopts image segmentation and image mosaic fusion technology;
2. Non-destructive measurement of living plant leaves, it measures leaf area, leaf length, eaf width, aspect ratio, perimeter, shape factor, shape coefficient;
3. Software online upgraded
4. Mechanical rotation and ridge thickness adjustment design to ensure that plant leaves will not be damaged when pull the leaves during the measurement process;
5. Designed with light touch button to ensure the accuracy of collected pictures during measurement.

Measuring Length: 0-30,000mm	Accuracy: ±1%	image splicing: ±2%
Measuring Thickness: Unlimited		
Measuring Width: 0-150 mm	Accuracy: ±1%	image splicing: ±2%
Aspect ratio: 0.00-10.00	Accuracy: ±2%	
Measuring Perimeter: 0-1,000 mm	Accuracy: ±2%	image splicing: ±3%
Measuring Area: 0-1,000,000 mm²	Accuracy: ±1%	image splicing: ±2%
Shape Factor: 0.00-1.00	Accuracy: ±2%	image splicing: ±5%
Shape Coefficient: 0.00-1.00	Accuracy: ±2%	image splicing: ±5%

YMJ-A

Local data storage,
4*AA batteries

YMJ-B

With PC software, Interface: USB,
4*AA batteries

YMJ-C

Interface: Wi-Fi, Bluetooth or USB,
Li-ion batteries

YMJ-D

With software, Interface: USB,
Li-ion batteries

YMJ-E

Stitching & Camera type, interface: Wi-Fi,
Bluetooth or USB, long leaf available

PLANT TRANSPIRATION METER

◆ TPZT-1000

Measured Parameters



air temperature
(AirT)



air humidity
(ARH)



Leaf temperature
(leafT)



PAR



Transpiration rate
(Tr)



stomatal conductance
(Gs)



PLANT PHOTOSYNTHESIS METER

◆ 3051C

Measured Parameters

CO₂; air temperature (AirT);
air humidity (ARH)
Leaf temperature (leafT);
leaf chamber humidity (LRH); PAR
Gas flow (Flux); photosynthetic rate (Pn) ;

Respiration rate (-Pn),
Transpiration rate (Tr);
stomatal conductance (Gs),
Water use efficiency (We);
Inter-cellular CO₂ (CO₂In)

Features and Benefits

1. Wide application: equipped with different types of leaf chambers, it can be widely used in the determination of different shapes of leaves of various plants such as field crops, fruit trees, vegetables, pastures, etc.;
2. High performance-price ratio: low price, low use cost and convenient maintenance.
3. Air circuit blockage protection and alarming function.
4. The air humidity and the leaf chamber humidity are installed on the measuring handle.



(New)



(old)

Technical Parameters

Leaf Blade temperature	range:0-60℃, resolution: 0.1℃, error: ≤ ± 0.2℃
Air humidity	range:0-100%RH, resolution: 0.1%RH, error: ≤ ± 1.8%RH
Leaf chamber humidity	range:0-100%RH, resolution: 0.1%RH, error: ≤ ± 1.8%RH
Air temperature	range:-20-120℃, resolution: 0.1℃, error: ≤ ± 0.2℃
PAR	silicon photocell with correction filter, measurement range: 0-3000μmol·m ⁻² ·s ⁻¹ , resolution: 1μmol·m ⁻² ·s ⁻¹ , error: ≤5%
Flow meter	miniature electronic flow meter, measuring range: 0-1.5L/min, resolution: 0.01L/min, error: 2%
Leaf chamber size	standard 55 × 20mm window (optional 55 × 10mm, 20 × 20mm, 11.3mmleaf)
Display screen	320 × 240 graphic dot matrix LCD screen
Working conditions	20℃ - 50℃
Working Relative humidity	0-100%
Power Supply	DC7.4V lithium battery, continuously work for 7-9 hours

PLANT STEM FLOW METER

◆ TPJL-1000

The pin-type plant stem flow meter uses the heat dissipation probe method to measure the instantaneous runoff density of the tree trunk, which can continuously observe the sap flow of the tree for a long time, which is beneficial to study the water exchange law between the tree and the atmosphere, and use it as an observation method to monitor The impact of forest ecosystems on environmental change.



Features and Benefits

- 1.The probe can be reused: double probes, equipped with drilling tools
- 2.It can be heated at a constant temperature
- 3.Collection time interval :1-99m

Technical Parameters

Measurement method	heat dissipation probe method (constant heat flow sensor method)
Measurement parameter	Instantaneous flow density
Probe length	33mm
Number of probes	2
Display	320*160 LCD screen
Storage capacity	2GB
Sampling time interval	1-99 minutes adjustable
Power supply	8.4V rechargeable lithium battery

PLANT CANOPY ANALYZER

◆ TOP-1000 Calculates LAI Of High Lying Plant Canopies

Features and Benefits

- 1.Integration design, it includes LCD, operation buttons, SD card plug and measure probe.
- 2.Menu operation is easy; small size and portable
- 3.Large store capacity. Convenient data management.
- 4.Low power dissipation with reasonable power management with automatically shut down and restarts action.
- 5.measure method : Manual and automatic



Technical Parameters

Measuring	range: 0-2700umolm ² /s	Meter length	75 cm
Resolution	1umolm ² /s	Probe length	50 cm
Auto- collecting interval	1-99minutes adjustable	Qty of Sensors	25
Auto-collecting times	1-99times	Power Supply	2*AA batteries
SD card Storage capacity	2GB	Working environment	0°C-60°C; 100%RH

PLANT STEM STRENGTH TESTER

◆ YYD series

Plant stem strength tester can also be called a lodging resistance tester. This instrument is widely applied in the area of Agricultural Genetic Breeding.

It mainly uses the pressure sensor to detect the bending strength, compressive strength, and puncture strength of the stem.

The strength of stems such as maize, sorghum, and tobacco is one of the major factors that determine lodging resistance.

For a long time, the lodging of maize, sorghum, and tobacco has caused great difficulties for the mechanical harvesting of cornfields.

From the view of mechanization, a great deal of food is wasted. In addition, the maize lodging leads to insufficient illumination, and the production is greatly limited.

Maximum load	500N (N, Kg and LB, three units can be automatically converted)
Resolution	0.1N
Accuracy	±0.5%
Stability	0.2uV/degrees (0-60 degrees C)
zero drift	less than 0.1%/8 hours /FS

Calibration	range:full scale calibration
Ambient temperature	0 ~ +60 DEG c
Ambient humidity	less than 80%
Overload allowed	150%
Power supply mode	AA nickel cyanide battery



YYD-1A

For crops with low lodging value like rice, wheat, max load 50N

YYD-1B

For crops with low lodging value like corn; max load 500N



YYD-1

With Holder stand
Max load 500N

IMAGE ANALYSIS FOR PLANT SCIENCE - ROOT MEASUREMENT AND ANALYSIS

◆ GXY-A

GXY-A is an image analysis system specifically designed for root measurement in different forms. It can do morphology (length, area, volume...), topology, and architecture analyses. It is made of a computer program and image acquisition components. It used to measure and analyse washed roots.



Image Acquisition Scanner

Equipped with optical resolution 4800dpi×9600dpi, A4 lengthened dual light source color scanner; Standard Scan area: 304 x 203mm

Computer can be self-purchased

Dual-core CPU /4.0G memory/1G video memory/500G hard disk/19.5" color display/wireless network card, more than 5 x USB2.0 ports, Windows 7 full professional version or full flagship version

Accessories

Scanner, measure trays x3, boosted blocks x3, software, dongle, Computer (optional)

Accessories

The number of tips / Length / Average Diameter / Projection Area / Surface Area / Volume / Topology (Number of Links, length, diameter, SA, PA, Volume)

Features and Benefits

1. Be able to analyse and export data of all roots, and classify the roots with different diameter of roots, display the distribution histogram.
2. Be able to link or disconnect the link, merge or fork, remove burr the roots and others operation. And all operation can be undo. Easy to operation
3. Can measure and analyse a large batch of roots at one automatically. And all the results will be exported to the same folder
4. Software encryption: dynamic QR Code+ dongle.
5. Result export: all results can be exported or add to previous Excel document.
6. Equipment with an extra boosted block to prevent any uneven upper cover of the measuring tray from adversely affecting the image accuracy and the scanner.

AgroProduce Quality Analysis



FRUIT FIRMNESS PENETROMETER

The fruit Firmness Meter is used worldwide as a measure of ripeness/maturity of many types of fruit, including apples, pears, mangoes, avocados and more.

Portable and Easy To Use: the fruit hardness tester is small in size and light in weight, so is easy to carry, intuitive in numerical display and easy to carry.

Technical Parameters

Model	GY-1	GY-2	GY-3	
Scale value	2-15kg/cm ² (x105pa)	0.5-4kg/cm ² (x105pa)	1-24kg/cm ² (x105pa)	0.5-12kg/cm ² (x105pa)
Probe size	ϕ3.5mm	ϕ3.5mm	ϕ8mm	ϕ11mm
Precision	±0.1	±0.02	±0.1	
Insertion Depth	10mm			
Size	2.05 x 0.87 x 4.53 (inch)			
Net weight	0.66lbs			

Technical parameter for GY-4

Range	0.2 - 15 Kg/cm ² (x105 Pa)	0.4 - 30 Kg/cm ² (x105 Pa)
Division value	0.01 Kg/cm ²	0.01 Kg/cm ²
Pressure head diameter	1# φ11.1mm	2# φ7.9mm
Precision	±1%	
Display mode	Digital	
Insertion depth of pressure head	10mm	
Communication interface	RS232	
Power Supply	Rechargeable Battery	



GY-1

Measure hard fruits;
probe x1 piece

GY-2

Measure Soft fruits,
probe x1 piece

GY-3

Measure both hard and soft fruits;
probes x2 pieces



GY-4

Measure both hard and soft fruits
probes x2 pieces, digital type



GY-4-J

Measure both hard and soft fruits;
probes x2 pieces, digital type,
with holder stand

BRIX REFRACTOMETER

◆ Analog Refractometer

Brix Refractometer with ATC, measurement range from 0-32%, 28-62%, 45-82%, 58-90%, 0-80%, which perfect for measuring sugar content in fruit, food, juice, honey, tea, beverages and sugar liquids, and fruit juice. Users can DIY juice, tea, and beverage with this Brix meter tester, easy to control drinks sugar concentration. It can be also used for laboratory and educational instrument. Resolution: 0.20%-0.50%



WZ103

Analog
Range 0-32%

WZ104

Analog
Range 28-62%

WZ105

Analog
Range 45-82%

WZ106

Analog
Range 58-90%

WZ108

Analog
Range 0-80%

◆ Digital refractometer

Digital type, touch key, Portable and easy to carry, 1 *AAA battery is able for up to 8000 times measurement, Long standby time.



Technical Parameters

	Range	Accuracy	Resolution
Brix	0.0%-50.0%	±0.2%	0.1%
	0.0%-90.0%	±0.2%	0.1%
R.I.	1.3330-1.4200	±0.0003	0.0001
	1.3330-1.5177	±0.0003	0.0001
Temperature	0.0-40.0℃	±0.5℃	0.1℃
	32.0-104.0° F	+0.9° F	0.1F
Dimension	121*58*25mm		
Net weight	90g (excluding battery)		

TD-45

Digital , range 0-50%

TD-62

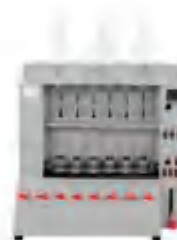
Digital , range 0-90%

RAW FIBER ANALYZER

◆ CXC-06

Raw /Coarse Fiber Analyzer tests raw fiber content according to acid and alkali boiling method.

It adopts accurate concentration acid and alkali to boil samples in particular condition, then remove soluble substances by ether, deduct the amount of minerals by high temperature burning.



Measuring object: raw fiber content in various kinds of grain, feed, food and other agriculture and sideline products

Measuring sample quantities: 6pieces /times

Reproducibility error:

- Raw fiber level <10% • absolute value errors0.4% • Raw fiber level >10% • absolute value errors4%

Measuring time: about 100min (including acid 40min, alkali 40min, filter and wash 20 min)

Power: AC220V/50HZ, 2800W

Shape Size: 670×450×670mm

Water supply: water pressure >1.5MPa

Net Weight: 30kg

Water temperature: <20°C

SOXHLET EXTRACTION FAT ANALYZER

◆ SZF-06C

Fat Analyzer tests fat content according to Soxhlet Extraction principle. It features extraction, reagent recovery, a cooling system, and temperature control.

Features and Benefits

1. Small volume, fast heating speed, even heating,
2. Extraction bottle and apparatus are made of glass to avoid other spills
3. Accurate digital temperature controlling, easy to operate.



Measuring range

oil content within the scope of 0.5%-80% of good, feed, oil and various kinds of fat products

Measuring sample quantity

6 simultaneously

Temperature controlling range

room temperature 0-100°C

Heating time

within 10 min

Power

AC220V/50Hz, 1000W

Recovery system

automatic

Shape size

670×250×600mm

Recovery rate

≥80%

Net Weight

23kg

NMR OIL CONTENT ANALYZER

◆ HCY-20

NMR Oil Content Analyzer is specially used for testing oil content in oil crops.

Features and Benefits

1. High efficiency, sample can be tested within 30s.
2. Safe, nondestructive, no pollution, low carbon, environmentally friendly
3. Expenses saving. Can save lots of water, electricity, either, labor, extraction, equipment expenses.
4. High accuracy and good stability.
5. Color LCD, mouse + keyboard, computer operation software carries on adjusting the frequency automatically
6. The data can be copied by USB flash disk to the computer and printed, software upgrades through USB flash disk



Sample volume

40ml

Stability

+0.1%

Oil measuring range

0.1%-100%

Power source

220V, 50HZ

Precision

+0.2%

Power consumption

≤40W

NEAR-INFRARED ANALYZER

◆ TPGA3000

Near-Infrared Analyzer is applicable to the fast, non-destructive and multi-index quantitative testing and analysis of the acquisition, storage and processing of wheat (flour), soybean, corn, rice and other grains. To provide a rapid testing method for grain quality identification. The instrument can be used in laboratory, workshop, field and other different places.

TESTING ITEMS

WHEAT:
Moisture, Protein, Wet gluten

GRAIN:
Moisture, Starch, Protein

RICE:
Moisture, Protein, Starch

SOYBEAN:
Moisture, Protein, Fat

CORN:
Moisture, Starch, Protein

FLOUR:
Moisture, Protein, Ash



FUNCTIONS

1. Efficient & Fast: Detecting time 1-3mins, simultaneously measure a variety of indicators of the sample, greatly shorten the detection time
2. Scientific Precision: The equipment uses patented testing technology, automatic acquisition of 25 subsamples for analysis, combined with advanced priority algorithm, the detection accuracy and stability are improved
3. Flexible & Diversified: According to the particle size of samples, the appropriate sample cell optical path module can be selected to detect different samples.
4. No damage: No need grinding, whole grain can be detector
5. Intelligent analysis: Equipped with special analysis software, Self-check, Model correction, Wavelength correction, Testing, Auto generate Report and other functions
6. Intelligent control: Equipped intelligent monitoring software, Electric(Power) status display, Temperature and Humidity monitoring
7. Convenient Operation: 8inch touch screen, Windows7 operation system
8. Compatible Power Supply: Continuous outdoor operations
9. Internet Applications: With USB type A, USB type B, RJ45 interfaces. Using for daily maintenance, model upgrade & update database

TECHNICAL PARAMETER

Spectral Range	680~1050nm
Res.	Superior to 7nm
Transmission Measurement Method	6mm、18mm、29mm
Detector	Silicon diode array
Measurement Method	Transmission, measurement can detect up to 25 subsamples per time
Product Size	360mm × 250mm × 300mm

KJELDAHL NITROGEN ANALYZER

Kjeldahl Analyzer is a device determining nitrogen content based on Kjeldahl method. It can be widely used in food processing, feed production, tobacco, livestock, soil fertility, environmental monitoring, medicine, agriculture, scientific research, teaching, quality control and other fields for the test of nitrogen or protein content with respect of macro and semi-micro samples and can also be used for the test of ammonium, volatile fatty acid/alkali, and etc.

Applications

1. ammoniacal nitrogen
2. protein determination
3. nitrogen content
4. nitric nitrogen (after reduction/Devarda),
5. phenols, volatile acids,
6. cyanides and alcohol content.

Technical Parameters

Measure variety: foodstuff, feedstuff, foods, dairy products, drink, soil, water, medicine, precipitate, chemical.

Working mode: semi-automatic or Automatic

Measure range: 0.1~200mgN (nitrogen content 0.1%-99%).

Recovery rate: ≥99% (relative error, include digestion process)

Cooling water consumption: digestion: 5L/min; Distillation: 3L/min; (Water temperature is less than 20℃)

Repetition rate: relative standard deviation <±1%

Working hours: distillation time: 5-15 minutes.

Power Supply: AC 220V/50HZ, 1000W



KDN

Semi-Automatic type



ZDON-II

Automatic Type

DIGESTION FURNACE

◆ KDN -C

The digital temperature control digestion furnace is designed for bulk samples of Kjeldahl sample digestion designed to users, can simultaneously digest multiple samples. The device has high digestion efficiency, the result is ideal, easy to use and maintain, is the user's ideal digestion device.



Name of item	Model	Model	Model
	KDN-04C	KDN-08C	KDN-20C
Max. Digestion quantities Once	4	8	20
Heating Module Material	Infrared		
Temperature control mode	Digital		
Temperature control ranges	room temperature~600℃		
Temperature control accuracy	±1℃		
Measurement range	0.1mgN~200mgN (mg nitrogen)		
Digest time	60~90 min/batch (according to sample quantity)		
Digestive pipe capacity	300ml		
Power	1KW	1.5KW	2.5KW
Operating Voltage	AC220V/50Hz		

DIGITAL GRAIN HARDNESS METER

The digital Grain Hardness Meter is used for scientific research and education in agriculture. It is mainly used for testing the hardness of grain or feeds. With the characteristic of high accuracy, strong indication, high resolution, easy operation, durable and reliable features, it can be measured by hand on site, and also in the laboratory.

Features and Benefits

1. Small volume, fast heating speed, even heating.
2. Extraction bottle and apparatus are made of glass to avoid other spills
3. Accurate digital temperature controlling, easy to operate.



GWJ-1

Manual reset; Max load 20kg /196N
Accuracy: $\pm 2\%$



GWJ-2

Auto reset; Max load 20kg
Accuracy: $\pm 0.5\%$

LABORATORY RICE HUSKER TESTER

◆ TP-JLG-2018

Features and Benefits

1. Brown rice rate meets the standard GB5495-2008
2. Engineering plastic material with well-formed, handle well and running stable
3. Rice sample size can be set as demand. Easy to operate
4. Be able to continuous feed, husk automatically.
5. PU roller, husking without damage, the rate of broken rice is lower
6. The distance of roller, wind force is adjustable.



Husking percentage	97%-100%
50g sample husking time	40s
Rice broken rate	<3%
Rotate speed	2800r/min
Adjustable spacing of roller	0~3mm

Collection case capacity for brown rice	120g
Collection case capacity for brown husk	60g
Motor power	120W, AC 220V
Voltage	220V

AUTOMATIC RICE POLISHER

◆ TP-JBJ

Automatic Rice Polisher is a special instrument for rice quality detection, which is mainly used for the detection of milled rice rate and potential yield of rice and brown rice.

Features and Benefits

1. Simple operation: the equipment adopts diamond grinding wheel, bran powder separation system and automatic control system to realize one key operation.
2. High grinding efficiency: intelligent automatic technology can realize automatic shutdown, automatic collection of milled rice and automatic separation of bran powder.



Power supply	220V $\pm$ 11V 50Hz $\pm$ 0.5Hz
Power	$\leq$ 200W
Grinding chamber diameter	95mm

Disc	Diamond
Optimum grinding capacity	15g
Grinding time	1s-99s (adjustable)

RICE DEHUSKING MACHINE

◆ LTJM-2099

A machine to complete the whole process of rice husking and brown rice whitening at one time.

Working voltage	AC220V±10%, 50Hz
Working time	default 50 seconds (10-90s adjustable)
Motor power	650W
Sample weight	150~170g
Hulling rate	≥99% (according to the sample)
Net weight	16kg



FALLING NUMBER METER

◆ FN-II

This instrument is testing α -amylase activity index in grains based on Berhagger's sedimentation value method. The suspension liquid of cereal flour (such as wheat flour) can gelatinize quickly in boiling water and different amylase activity cause different liquefaction degrees of starch of gelatinization, and then different falling speed of mix stick in gelatinization, the Falling Number shows the difference of Amylase activity, low value shows high activity. Falling Number is expressed by the seconds needed to drop a certain height freely in gelatinizing liquid.



1. Water bath apparatus: consists of heating unit, cooling system and water level indicator.
2. Electric timer: digital and precision time control
3. Test results: automatically calculated by SCM, printed out by printer
4. Mix stick's weight: $25 \pm 0.05g$
5. Water bath barrel preheated pipe: 800W
6. Viscosity tube: made by special glass.
 - Inside diameter $21 \pm 0.02mm$
 - Outer diameter $23.8 \pm 0.25mm$
 - Inside high $220 \pm 0.3mm$
7. Repeat: Difference of the two test results does not over 10%
8. Size: $180 \times 440 \times 615mm$
9. Weight: 22.5kg
10. Power resource: AC 220V±10% 50Hz

SIEVE ANALYSIS APPARATUS

◆ JYSY30 *8

Automatic Rice Polisher is a special instrument for rice quality detection, which is mainly used for the detection of milled rice rate and potential yield of rice and brown rice.

Features and Benefits:

Sieve Analysis Apparatus is researched and developed by our company according to national standard GB/T 5507-2008 "testing of grain and oil, degree of flour thickness".

It's a professional instrument for testing the degree of thickness of flour and grain. It has the advantages of reasonable structure, steady operation, stable performance, sturdy and durability, ease of operation. And it is the necessary testing equipment used by the Quality and Technical Supervision Bureau, grain and oil quality inspection departments, food processing industry, schools, and so on departments need to test the degree of thickness of flour and grain.



Sieve diameter	300nm	Sample weight	50.0g
Sieve height	30nm	Time setting	0 - 999s
Gyratation diameter	50nm	Motor power	90w
Rotating speed	250r/min	Working Voltage	AC 220v±10% 50Hz

DIGITAL DOUGH TENSILE ANALYZER (EXTENSOGRAPH)

◆ HZL-350

The electronic Dough Tensile Analyzer is a flour quality measuring instrument by the international common, it detects the dough extension resistance and extension length by the computer to the collected Dough Tensile Analyzer on the dough extension resistance measurement



Applications

1. A comprehensive evaluation of flour quality through dough tensile performance indicators (extensibility, resistance to extension, curve area, tension ratio, etc.).
2. Determine the improvement effect of the flour improver and determine the appropriate amount of flour improver in the flour.
3. According to the stretching curve of different times, guide the production process of bread, steamed bread, and other foods, and determine the appropriate flour fermentation time.

product name	Electronic Dough Tensile Analyzer	Instrument accuracy	Class B
model	HZL-350	rim Rotating speed	15 ± 1
power	20W+15W+10W	Ramen hook descending speed (cm/s)	1.45 ± 0.05
power supply	220V, 50Hz	Coordinate scale range	Abscissa: 0 – 2500mm Y-axis: 0 – 1000FU
Executive standard	GB/T 14615-2006	Speed of statistics cm/s	0.65
Dough quality	150g	mNmm/FU Unit resistance	12.3+0.3mN/EU
Computer interface	USB	Instrument size (cm)	L1000 W700H700
Rotating speed of kneader	83 ± 3r/min, stop after 20r	Gross weight (kg)	130kg

DIGITAL FLOUR QUALITY ANALYZER (FARINOGRAPH)

◆ HZL-150

The farinograph is an instrument that evaluates the strength of flour gluten by measuring the rheological properties of the plasticity of dough. It is mainly used in wheat flour processing, food processing, agricultural breeding, quality inspection agencies, universities, colleges, and other departments. In addition, it is also widely used in grain circulation departments to control the quality of wheat circulation links.

Typical application

1. Test the water absorption of wheat flour and evaluate the water absorption performance of the flour
2. Test the gluten strength of wheat and wheat flour to determine its most suitable use
3. Quality control during wheat procurement and flour processing to determine the proportion of wheat and flour
4. Evaluate the rheological properties of the dough mixing process (formation time, stabilization time and degree of softening).
5. The same applies to triticale flour
6. It can also be used for mixing test determination of free-flowing materials similar to dough (such as chewing gum, cheese, fish flour, chocolate, and fat).



Motor Power	0.2 Kw	Rotating speed of dough mixing knife	63rpm
power supply	220V, 50Hz Allowable voltage fluctuation, ± 10%	Rotating speed ratio of main and auxiliary mixing knife	1 : 1.5
Experimental flour quality	300g Kneading bowl or 50g kneading bowl	Coordinate scale range	0 – 1000FU
Computer interface	Network port	Abscissa speed	10mm/min
Torque measurement method	Electronic torque sensor	Unit torque	300g Kneading bowl: 9.8mN · m/FU 50g Kneading bowl: 1.96mN · m/FU
Accuracy	Not more than the range 0.5%		

MJ SERIES GLUTEN TESTER

MJ series Gluten Tester is a professional instrument for testing gluten content, gluten index, and gluten water retention rate in the flour. The whole set includes host machine, index apparatus, and dryer. It's suitable for accuracy testing of wheat flour and entire wheat flour. It is widely used in food and flour processing department, grain and oil scientific research institution, grain storage department, universities, scientific institution, etc.

Technical Parameters

- a) Agitator rotation speed: 120 ± 2 r/min
- b) Thin wash mesh size: $80 \mu\text{m}$ (200mesh) metal sieve
- c) Thick wash mesh size: $800 \mu\text{m}$ (26mesh) metal sieve
- d) Washing liquid flow capacity: $50\text{mL/min} \sim 56\text{mL/min}$
- e) Dough mixing time: 1s~59s (digital, adjustable, adjust start from each second)
- f) Washing time: 1s~59s; 1min~99mins (digital, adjustable)
- g) Centrifugation time: 1s~59s; 1min~99mins (digital, adjustable)
- h) Centrifugation speed: 3000 r/min, 6000 r/min ± 5 r/min (adjustable)
- i) Centrifugation mesh box: Aperture is $500 \mu\text{m}$
- j) Centrifugation acceleration speed: 2000g
- k) Dryer temperature: $150^\circ\text{C} \sim 200^\circ\text{C}$
- l) Working voltage: AC220V $\pm 5\%$, 50Hz
- m) Working environment: temperature: $0^\circ\text{C} \sim 40^\circ\text{C}$ RH<80%
- n) Shape size and weight: (L*W*H) (the single-head tester consist of host machine and dryer)
 - 1) The machine: $400 * 300 * 240$ mm 13kg
 - 2) Index Apparatus: $240 * 240 * 200$ mm 4kg
 - 3) Dryer: $220 * 220 * 65$ mm 1.5kg



MJ-IIA

Single-head gluten tester



MJ-IIIA

Double-head gluten tester

WHITENESS ANALYZER

◆ WSB-V

Whiteness Analyzer is used to test whiteness of objects. It applies to the department of flour, starch, ground rice, salt, tactile, printing and dyeing, chemical fiber, plastic, porcelain, clay, talcum powder, white cement, paint, ceramic, enamel, paper, pulp and so on.

Technical Parameters

Diffuse illumination and vertical sounding method(d/o), simulation D65 illuminant use d/o illuminating viewing and geometrical condition. Globe of diffusion diameter is 120. Measuring whole diameter is 20 mm. Have light absorb device to eliminate reflected ray of sample mirror surface.



Repeatability	≤ 0.1	Working environment	temperature $0 \sim 40^\circ\text{C}$ humidity <80%RH
Indicating value drift	≤ 0.1	Power	AC (220 $\pm$ 22) V 50HZ
Zero point drift	≤ 0.1	Weight	9.3KG
Indicating value error	≤ 0.5	Size	32*40*48CM
Output mode	three and a half digital display, built-in printer (according to customers' needs can be with printing function or not)		

LAB HAMMER WHEAT MILL

◆ JXFM110

Feature and Benefits

1. High speed, high efficiency, small crushing objects
2. Easy to operate, Built-in protection switch, safe use
3. Paste advanced wall cabinet sound insulation materials inside the box, the noise made less than similar products at home and abroad.
4. Has temperature device built in the motor, it will automatically shut down once the motor exceeds the set temperature, when the temperature drops to normal, it can restart.
5. Can be directly installed automatic feeder, which can effectively control the feed rate of high moisture samples and shell corn to improve the crushing effect.
6. Suitable for the gluten quantity and quality, grain viscosity, wheat falling number, near-infrared composition, and other parameters



Power supply	AC220±10V 50Hz	Sieve plate aperture	0.5, 0.8
Motor power	750W	Shape size	51*31*41mm
Workroom diameter	110mm	Operating weight	51kg
Crusher hammer rotating speed	16800r/min		

Item	Sample	Sieve aperture(mm) required		requirements of sample particle			Note
				Aperture (mm)	mesh	Sieve No.	
Gluten	wheat	0.8	95% PASS	0.427	40	CQ16	
Falling number	Cereals	0.8	90% PASS	0.505	35	CQ14	100% PASS0.71mm
Viscosity	grain	0.5	90% PASS	0.270	60	CQ24	
	corn	0.8	90% PASS	0.437	40	CQ16	
fatty acid value	rice	0.8	95% PASS	0.437	40	CQ16	
	grain	0.8	90% PASS	0.437	40	CQ16	

LAB WHIRLWIND MILL

◆ FS-II

Lab Whirlwind Mill adopts high-speed cyclone grinding principle, slowly joined in the sample feed opening by the high-speed rotary impeller flow throw on the milling room, was stroked into powder, by the way the wind way to get into the sample collection bottles, in order to obtain the required samples.



Motor power	370 W	Impeller diameter	127mm
Impeller speed	10,000 turn / min	Grinding out rate	> 98%
Feed Rate	1-2 g / s	Power Supply	AC 220V, 50HZ, 5A

Pest and Insect monitor

INSECT-TRAPPING LAMP

◆ TPSC1 & TPSC-2

Technical Parameters

Power	AC185-265V, 50Hz	Life span	≥5 years
Network voltage	2300V/ ±115V	Light source	15W wavelength trapped tube; Electronic ballast can be started instantly.
Insulation resistance	≥2.5MΩ	Impact area	≥0.15m ²
Watt	≤35W	Control area	2-4ha



OLARPOWER FREQUENCY PEST KILLING LAMP

◆ TPSC3

Feature and Benefits

1. By using the vertical grid and make the pest clean more easy
2. The frequency vibration's wavelength can be selectable (wavelength: 320~600nm)
3. Three control modes available: Light control, rain control, time control
4. Both AC and solar power supply available.
5. Control area per lamp: 0.67-1.3ha



TPSC3-1



TPSC3-2



TPSC3-3

Technical Parameters

Power	DC12V/24Ah	Rate	≤35W
solar panel	≥40W	Lifetime of the lamp	3-5years
The voltage of power grid	2300V±115V	Light Source	15W frequency vibrations tube (Wavelength: 320nm~680nm)
Silk Area	≥0.16m ²	Insulation resistance	≥2.5MΩ

TPSC1

Light and rain control

TPSC2

Light and rain control
with storage battery

TPSC3

Solar Power supply, light,
rain and time control

WIND SUCTION PEST-KILLER LAMP

◆ TPCZ5

Feature and Benefits

1. Both AC and solar power supply available.
2. LCD display, Stainless steel rack.
3. Light control; auto-shut up and down according to day and night
4. Rain control; Auto-protection in rainy days, when humidity above 95% RH, the frequent vibration lamp will be in the state of auto-protection, or it will work normally
5. Time control; working time can be setting according the pests' life routine.
6. Optics, electricity, CNC technology in automatic control system.
7. Control area per lamp; 1-1.3ha
8. Energy saving; when working on light or time control method, the fans is working in the low speed condition.



Technical Parameters

Power	AC220V / 50Hz, DC12V, ≤20W.	Solar cell	50W
Insulation resistance	≥2.5MΩ	Life span	≥5000hours
Trap tube	wavelength 385~420nm, ≤10W.		

AUTOMATIC PEST FORECAST LIGHT TRAP

◆ TPCB-II-C4.0/TPCB-III-C4.0

Feature and Benefits

1. Manually control the function of changing positions, trap light switches,
2. heating tube switches, insecticidal bins and drying bins.
3. With the light control, rain control, time control, infrared treatment of insects and separately store.
4. The whole structure uses stainless steel and the display is 7 inches capacitive touch screen.
5. View data and control the work time.
6. Support GPS positioning function to obtain and calibrate single chip working time.
7. Separate pest body from rain.



Technical Parameters

Power	AC220V±60V; DC24V	solar battery	(12V/ 100AH *2pcs)	Solar cell	135-150W
Power	≤ 450W	Standby watt	≤5W.		
Life span	≥5 years				
Light source	25W trapped tube; Dominant wavelength: 365nm				
Start time of the tube	≤ 5s				
Far infrared cabin's temperature	80-90℃ after 15min working.				
Insulation resistance	≥2.5MΩ				

REMOTE CAMERA TYPE PEST FORECAST LIGHT TRAP

◆ TPCB-III-C7.0plus

The Pest Forecast Light Trap is a new generation pest detection and prediction device by adopting image recognition technical. On the condition of no people monitoring, the device can automatically complete the job such as: pest attracting, pest killing, pest dispersing, photographing, pest photograph, transportation, collection, identification and so on. Meantime, the tested environmental data and pest and disease data will be upload to the cloud platform in real time. This cloud platform has the function of automatic recognition and calculation, and analyze, predict the pests' development.



Feature and Benefits

1. 20 million pixel camera: remote camera through web and mobile APP automatically or manually.
2. System can automatically calculate the pest and identify smaller pest.
3. Solar DC power supply, work normally in rainy days, in case that any important pest migration information missed.
4. Light control: Automatically running at night and shut down in day time(standby status)
5. Time control: to set working time according to target pest's living habits.
6. Data warning: remotely upload the parameter to server through internet which is convenient for maintenance and management.
7. GPS positioning and anti-theft: built-in GPS positioning function, users can view the device location on map.
8. 2G/3G/4G/net wire /wireless /gateway for optional.



Technical parameter

Light source	20W trap light tube	main wavelength	365nm
Lamp turning on	<5s after the device is on.	internet	Limited fiber/wireless bridge/4G router
Insulation resistance	<2.5M Ω	Device size	800*800*2009mm
Camera	1200million industrial camera	Working environment	0-70 ℃
Display	7 inches capacitive touch screen	Environment humidity	Environment humidity: ≤90%

INCUBATORS

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PLANT GROWTH INCUBATOR / SEED GERMINATION INCUBATOR

By setting the multiple parameters, it is able to mimic a natural environment. It has functions of illumination, constant temperature, constant humidity, and meet various biological incubation tests.

Feature and Benefits

- Backlight large-screen LCD screen, showing the guiding operation process, intuitively display the local time, the remaining time of the period, the temperature value inside and outside of the chamber.
- 0-99 time periods are automatically converted, and the light intensity is adjustable in 10 levels
- Sterilization time can be set, automatic sterilization
- Using independent plate-shaped LED lamp beads instead of non-traditional column-shaped LED lamp tubes, the illuminance is more uniform and better, which is conducive to the growth of plants and improves disease resistance
- Over-temperature protection



GTOP-158Y



GTOP-268Y/310Y
RTOP-268Y/310Y



GTOP-400Y/500Y
RTOP-400Y/500Y



GTOP-1000Y
RTOP-1000Y

Application

1. Seed germinate and breeding
2. Plant group foster and planting growth
3. Animalcule incubation
4. Breeding of insects and small animals
5. Environmental experiments of articles
6. Study of Bioengineering, Medical study, agricultural, Aquatic, Animal husbandry, etc.

Technical Parameter

Model	Volume	External Size(L*W*H)	Standard Light degree	Light Grade
158Y	150L	525*540*1580	0~3500LX	0-3
268Y	268L	580*630*1755	0~8000LX	0-10
310Y	310L	580*630*1895	0~8000LX	0-10
400Y	400L	610*708*1865	0~8000LX	0-10
500Y	500L	705*825*1971	0~8000LX	0-10
1000Y	1000L	1230*708*1865	0~12000LX	0-10

Type	GTOP Series	RTOP Series
Temperature range	0~50℃	
Temperature fluctuation	±0.5℃	
Temperature uniformity	±1℃	
Humidity Range	/	50~95%
Humidity fluctuation	/	±5%RH
Deviation	/	±5%RH
Illumination	0~12000lux (Standard), 0~20000LUX (customized)	
Light Grade	0-10levels	
Number of programmable period for temperature and illumination	0-99 periods	
Cooling power	190W-480W	
Compressor delay protection time	about 3 minutes	
Working mode	continuous operation	
Power supply	AC 220V, 50HZ	
Operating environment conditions	0~35℃, ≤85%RH, 86~106Kpa,	
Shelf height	33cm QTY of shelf: 3 the height could be adjust within 10cm	
Shelf material	Stainless steel	
Bearing weight	20kg	

SEED AGING BOX

Seed Aging Cabinet is a nice incubator used in seed laboratories to test the resilience of seeds or sometimes called the Seed Vigor Test. This cabinet has used construction layers of temperature, interior parts coated with stainless steel, precision, and uniform temperature control. The excess characteristics of this equipment also include a control system with microcomputers for temperature ditches, PID controls, protection against leaking Aurs, time settings.

Model	LH-150	LH-150S
Temperature range	RT+ 10~65℃	RT+ 10~65℃
Temperature accuracy	±0.5℃	
Humidity range	—	50~95%RH
Humidity accuracy	—	±5%RH
Volume	150L	150L



LOW TEMPERATURE-HUMIDITY SEED CABINET

Feature and Benefits

1. Microcomputer automatic set and control temperature, humidity and time.
2. Control system has functions of defrosting, delay, overheat alarm, automatic dehumidifying, jet lag correcting, ultraviolet radiation sterilizing
3. Made by stainless steel, air cooling system, anti-frost
4. Multi security protection (electric shock and leakage, overload, overflow, compressor delay start)

Temperature set range	0°C~9.9°C	Humidity accuracy	±5%RH
Temperature accuracy	±1°C	Power supply	220V 50HZ/60HZ
Humidity set range	30%~60%RH	Defrost mode	automatic



CZ-250FC/300FC

Volume: 250L, Single door



CZ-450FC

Volume: 450L, Single door



CZ-1000FC

Volume: 1000L, Dual-door



CZ-1600FC

Volume: 1600L, Triple-door

MOULD INCUBATOR

The Mould incubator is made up of the incubator box, disinfection ultraviolet lamp, heater, chiller, circulation fan, controller, temperature sensor, humidity sensor, humidifier, overheat protector and etc.. It can make the temperature and humidity stable to the certain value according to users' need. It can be used as mold training, microorganism training, objects physical performance testing, insects and small animals breeding, plants sprouting, biological products storage, blood and chemical storage.



Temperature control range	0-50°C	Compressor delay guard time	>3min
Temperature fluctuation	±1.0°C	Noise	<70dB
Humidity adjusting range	50-95%RH	Working mode	continuous operation
Humidity fluctuation	±7%RH	Working environment	temperature: 0-40°C
Heating power	150-1000W	Humidity	< 80%RH, non-corrosive gas
Refrigeration mode	intermittent refrigeration	Power	220V, 50Hz
Compressor power	220W-700W		

Model	Volume	External Size(L*W*H)	Temperature range	Humidity range
MJX-150	150L	525×540×1580mm	0-50°C	50 - 95%RH
MJX-260	260L	580×630×1755mm	0-50°C	50 - 95%RH
MJX-300	300L	580×630×1895mm	0-50°C	50 - 95%RH
MJX-1000	1000L	1230×708×1865mm	0-50°C	50 - 95%RH

DRYING OVEN

The oven is applied to the drying, braking, wax melting and sterilization of the articles in industrial and mining enterprises, colleges and universities, scientific research and medical units, labs, etc.

Feature and Benefits

1. Adopt LED digital highlight display microcomputer temperature controller with temperature control protection and timing function, the temperature control is accurate and reliable.
2. The inner body of oven is made of mirror stainless steel or drawn by ammonia arc welding, and the external body is made of high-quality steel plate material, which is beautiful and novel in appearance.
3. The hot air circulation system consists of a fan that can operate continuously at high temperatures and a suitable air duct. The temperature of the working room is uniform.
4. Imported fan and imported thyristor are used, which has a long service life and can avoid frequent replacement.
5. Independent temperature limit alarm system, automatically interrupts when the temperature exceeds the limit, to ensure the safe operation of the experiment without accidents. (Optional)
6. It can be equipped with a printer or 485 interface, which can be used to connect to a printer or computer for real-time recording and temperature parameter changes. (Optional)
7. The "D" series is an intelligent ten-segment programmable liquid crystal controller.



Model	9035A 9035AD	9055A 9055AD	9075A 9075AD	9145A 9145AD	9245A 9245AD
Timer	1-9999minutes				
Temperature control range	RT+10℃-300℃				
Temperature fluctuations	±1℃				
Temperature Resolution	0.1℃				
Power Supply	AC 110V / 220V 50HZ				
Working size	340*325*325	420*400*345	450*400*450	550*450*550	600*550*750
Packing size	525*510*490	720*580*520	740*580*630	820*650*730	880*770*930
Input power	870W	1320W	1570W	2170W	2870W

HEAT STERILIZER OVEN

By making use of high-temperature and dry-heat technology, the equipment can poison microorganisms by oxidizing them and causing denaturation of protein and concentration of dielectrics. It damages protoplasm of cells by oxidation to cause microorganisms die. Hence, in certain heating time, all microorganisms can be killed.

Feature and Benefits

1. Digital display microcomputer temperature controller with timing function.
2. Quick temperature rise, forced convection, dry and hot air can directly pass through the heated object for day and sterilization, which apparently shortening the time.
3. The equipment can automatically break off, if limited temperature is exceeded, to ensure safety.
4. Adjustable ventilation door, spacing of shelves can be arbitrarily adjusted.



Model	GRX-9023A	GRX-9053A	GRX-9073A	GRX-9123A	GRX-9203A
Inner Chamber size (W*L*H)(mm)	340*325*320	420*395*350	400*450*450	550*450*550	600*600*650
Exterior size (W*L*H)(mm)	520*490*490	720*580*520	740*590*630	840*570*730	880*750*825
Timer	1-9999min				
Temp. Range	RT+10-300℃				
Temp. Motion	±1℃				
Voltage	220V / 50Hz				
Number of shelf	Standard 2pcs, could be add to 4pcs				
Watt	870W	1320W	1570W	2070W	2470W

ULTRA LOW TEMPERATURE REFRIGERATOR

1□+2°C~8°C Pharmacy Refrigerator

The pharmacy refrigerators are suitable for installation in drug stores, pharmaceutical companies, hospitals, epidemic prevention centers and clinics.



MPC-5V316



MPC-5V656



MBC-4V658



MBC-4V1008

2□4°C Blood Bank Refrigerator

Professional refrigerator to store blood, as well as medicines and bio products

Suitable for blood banks, hospitals, CDCs

MEDICAL FREEZER

This product is designed to store vaccines, blood plasma, and many other biological materials, installations can be found in researching institutions and clinical sites in life science, electronic testing and medical markets.

1□-25°C Medical Freezer



MDF-25V268E



MDF-25V328E



MDF-40V328E



MDF-40V278W

2□-40°C Medical Freezer

3□-86°C Medical ULT Freezer

This product is specially designed and manufactured for long term storage of various biological product, including viruses, germs, erythrocytes, leucocytes and cutis. Applications can be found in blood banks, hospitals, epidemic prevention services, and research institutes, laboratories in electronic and chemical plants, bio-logical engineering institutes and marine fishery companies.



MDF-86V188E



MDF-86V340E

Technical Parameters

MODEL	Volume L/cuft	Exterior Dimensions (mm)	Interior Dimensions (mm)	NT./GT. kg	Power/W	Temp Range/ □□□
MPC-5V316	316/11.15	660*555*1915	540*425*1380	92.5/100	228W	2-8℃
MPC-5V656	656/23.16	1240*630*1895	1100*454*1325	166/184	385W	2-8℃
MBC-4V658	658/23.23	1225*640*1895	1100*454*1325	202/257	364W	4±1℃
MBC-4V1008	1008/35.59	1240*860*1895	1100*684*1325	265/335	513W	4±1℃
MDF-25V268E	268/9.46	690*680*1635	508*455*1137	93.5/113.5	180W	-10--25℃
MDF-25V328E	328/11.58	690*680*1900	508*455*1393	104/125	180W	-10-25℃
MDF-40V278W	278/9.81	670*640*1695	480*415*1460	79/104.5	185W	-30-40℃
MDF-40V328E	328/11.58	685*670*1900	508*455*1393	110.3/132	300W	-30--40℃
MDF-86V188E	188/6.63	850*930*1595	465*465*830	174/224	660W	-40~-86℃
MDF-86V340E	340/12	875*980*1900	488*607*1140	222/283.5	810W	-40--86℃

WEATHER MONITORING

The weather monitoring equipment is a series of device that can automatically observe and store weather monitoring data. The product is an unmanned weather multi-element weather monitoring device developed based on the Internet of Things technology, wireless communication, sensors and other technologies. It is composed of meteorological sensors, data collectors, management cloud platforms, APP and other parts, which can monitor air temperature, air humidity, soil moisture, soil temperature, wind speed, wind direction, rainfall, light intensity and other conventional meteorological elements, and this type of weather station has the functions of real-time collection, wireless transmission, automatic storage, over-limit warning, data analysis and so on. It is widely used in the fields of microclimate monitoring, ecological environment monitoring, disease and insect forecasting, scientific research and teaching in agriculture, forestry, grassland, campus, universities, farmland, and other scenes.



OUTDOOR WIRELESS WEATHER STATION WITH CAMERA SYSTEM

◆ TP-WMS-1L

Feature and Benefits

1. User can remotely set the weather monitoring data collection time, storage and sending time interval through the management cloud platform.
2. The weather station has data collection and wireless upload functions
3. 4G CAT1 network and server communication, and the network supports 2G/4G;
4. Automatically obtains altitude parameters and GPS coordinate information, preventing theft and displacement.
5. Camera included: CMOS 1/2.7-inch image sensor, 200W (1280*1080) pixels, support timing camera, the users could check on-site photos on the platform in real time.
6. Remote online fault diagnosis
7. Remote firmware online upgrade
8. TF card which ensures 5 years of sensor data storage;



Standard Sensors equipped are

Air temperature, humidity, light intensity, rainfall, wind speed, wind direction, soil temperature, soil moisture, atmospheric pressure, images and others parameters can be customized.

Sensors	Measure range	Sensors	Measure range
Air temperature	-40 ~ 120°C	wind direction	0 ~ 360°
humidity	0% ~ 100%RH	rainfall	0 ~ 9999mm
Soil moisture	0 ~ 100%	light intensity	0 ~ 200000 lux
soil temperature	-50°C ~ 100°C	atmospheric pressure	450.0hPa ~ 1100.0hPa
wind speed	0 ~ 60m/s		

WEATHER STATION

◆ NL-5 (data saved by SD card)

Features

1. LCD screen, film-style keypad, date and time (year, month, date, minute and second), groups, temperature, humidity, illumination, Wind direction and speed, rainfall and other parameters are displayed on the host unit, Apparatus compact beautiful and very convenient
2. GPS location function
3. User settings himself, can be demanded the closure of the parameters do not need access.
4. Automatically collect various kinds of parameters datum, datum can be passed through the interface software (for free) to download to your computer.
5. Be able to shown the all the parameters of the visual data measured in the form of chart and curve to the user
6. Strongly expanded, procedures modular system structure and function to facilitate expansion or shielding.



Standard Sensors equipped are



Temperature and Humidity



Illumination



Rainfall



Wind speed and Direction

Solar power supply	10WP	Capacity	1M (local storage) + 4G (SD CARD)
Standby power	DC-9V/ 1A	Waterproof rate	IP54
Watt	≤ 1.5W		

Please find the technical parameters of above sensor on page 49

HANDHELD ALL-IN-ONE AGRICULTURAL WEATHER MONITOR

◆ TNHY series

Characteristic



Feature and Benefits

1. Wireless communication: Data is online displayed on cloud platform and mobile APP in real-time through 2G/ 4G.
2. LCD Screen, it displays the current date and time, the measurement data of each sensor, the number of stored data, and etc.
3. Data Collection methods: Automatic and manual
4. With GPS positioning function
5. Large storage capacity: nearly 30,000 data could be stored on Data Logger, plus a standard 4G memory
6. Lithium battery power supply: 7.4V 2.8Ah lithium battery, with charging protection, low voltage prompt function.
7. Low power consumption design, with system monitoring and protection measures to avoid system crashes.
8. Working temperature: -40-80℃

Model Difference

Model	Sensors included
TNHY-4	Temperature, humidity, Illuminance, CO ₂ Concentration
TNHY-5	Temperature, humidity, Illuminance, CO ₂ Concentration, PAR
TNHY-6	Soil temperature, soil moisture, temperature, humidity, light intensity, CO ₂ concentration
TNHY-7	Soil temperature, soil moisture, temperature, humidity, light intensity, CO ₂ concentration, PAR
TNHY-8	Soil temperature, soil moisture, soil salinity, temperature, humidity, light intensity, CO ₂ concentration, PAR
TNHY-9	Soil temperature, soil moisture, soil salinity, temperature, humidity, light intensity, CO ₂ concentration, PAR, Soil pH
TNHY-10	Soil temperature, soil moisture, temperature, humidity, light intensity, CO ₂ concentration, PAR, wind seep and wind direction, rain gauge
TNHY-11	Soil temperature, soil moisture, soil salinity, temperature, humidity, light intensity, CO ₂ concentration, PAR, wind speed and wind direction, rain gauge, soil pH
TNHY-12	Soil temperature, soil moisture, soil salinity, temperature, humidity, light intensity, CO ₂ concentration, PAR, wind speed and wind direction, rain gauge, soil pH, soil compaction
TNHY-13	Soil temperature, soil moisture, soil salinity, temperature, humidity, light intensity, CO ₂ concentration, PAR, wind speed and wind direction, rain gauge, soil pH, soil compaction, global solar radiation

Please find the technical parameters of above sensor on page 49

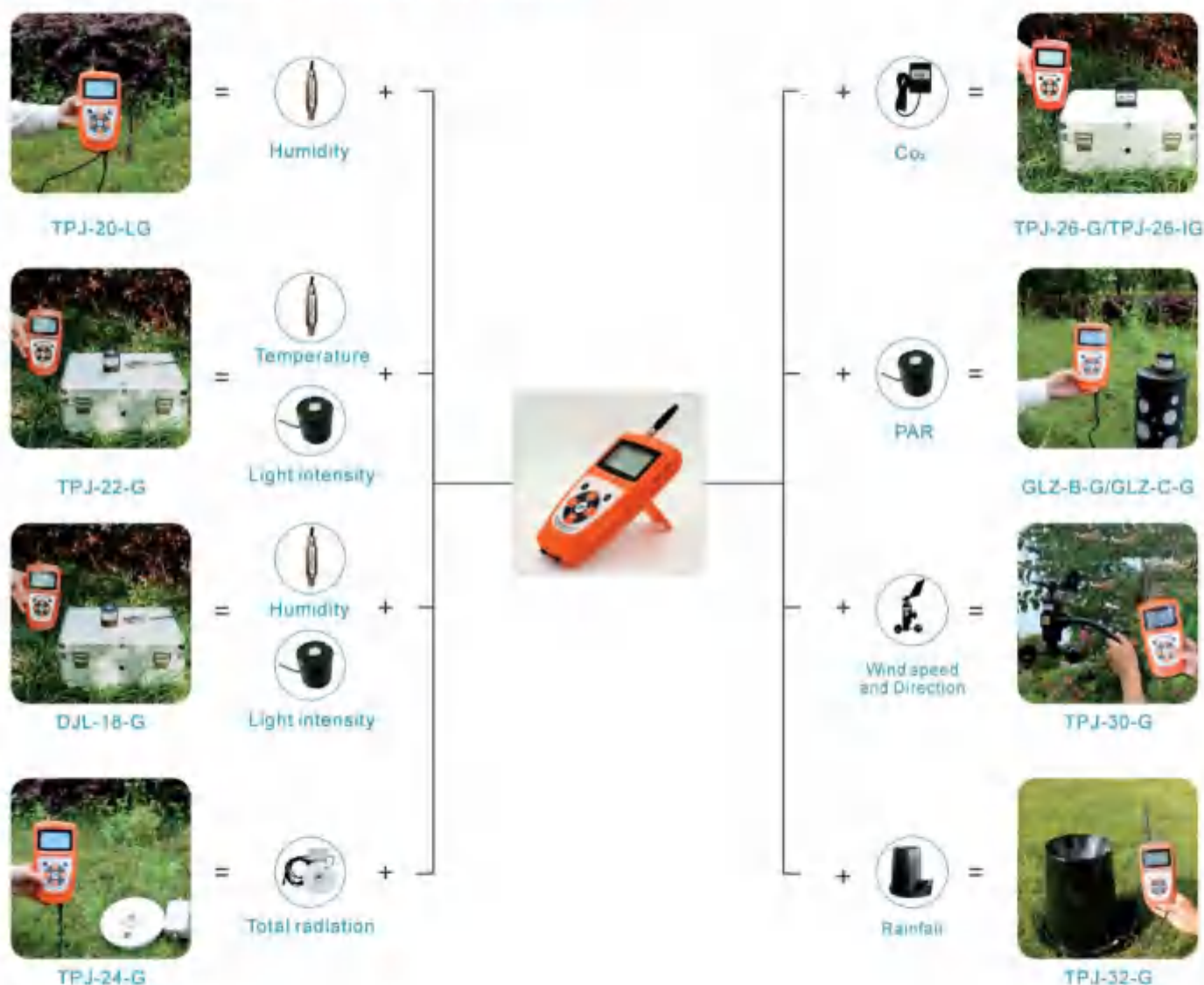
SINGLE OR MULTIPLE WEATHER RECORDER

The Multiple Parameters Soil Meter is made up of a Data Logger and soil sensors. The sensor includes Air temperature, humidity, CO₂, light intensity, wind direction, wind speed, rain fall, total radiation, PAR and etc. with GPRS and network, all data could be displayed on the cloud platform in real-time.

Feature and Benefits

-  Wireless communication: Data is online displayed on cloud platform and mobile APP in real-time through 2G/ 4G.
-  LCD Screen, it displays the current date and time, the measurement data of each sensor, the number of stored data, and etc.
-  Data Collection methods: Automatic and manual
-  With GPS positioning function
-  Large storage capacity: nearly 30,000 data could be stored on Data Logger, plus a standard 4G memory
-  Lithium battery power supply: 7.4V 2.8Ah lithium battery, with charging protection, low voltage prompt function.
-  Low power consumption design, with system monitoring and protection measures to avoid system crashes.
-  Working temperature: -40~80℃

Model as below or sensors can be configured as customized



SMALL FIXED WEATHER MONITORING STATION

◆ TPSBL series



Characteristics

1. With solar energy, collecting data; 32 sensors can be connected.
2. The amount of data storage: can cache about 500,000 pieces of data.
3. Convenient communication: The device has built-in GPRS wireless communication, uploading measurement data and remote setting function.
4. Low power consumption, use time: support solar energy and 220V power supply, built-in rechargeable lithium battery, once full, use time is not less than 200 days.
5. With GPS location function
6. Abnormal alarm: through the phone / Web / LED lights / voice prompts, remind users to deal with abnormal conditions.
7. Traffic management: The monthly remaining traffic can be stored and distributed to other devices.
8. Easy to use: QR code scan registration can be used.
9. Below Sensors can be equipped as customized: humidity, temperature, CO₂, PAR, Luminance, Raingauge, Soil pH, EC, Moisture and Temperature, Wind speed and Direction, Air pressure

Operating Environment -20℃ - 70℃
Shell Waterproof Rating IP67

Battery Capacity Built-in 20AH/3.7V polymer lithium battery
Other Stand with bracket, solar panel, flow card, waterproof host

Technical Parameters of sensors

Testing Index	Parameter
Temperature	Range:-40℃ - 80℃; Accuracy: ± 0.4℃; Resolution:0.1℃
Humidity	Range:0-100%RH; Accuracy: ± 3%RH; Resolution: 0.1%RH
Dew Point	Range:-40℃ - 120℃; Accuracy: ± 0.4℃; Resolution:0.1℃
Soil Salinity	Range: 0-19.99ms/cm; Accuracy: ± 2%
Soil Compaction	Range:0-100kg; Accuracy: ± 0.5% F.S
PAR	Range:1-2,700 molm ⁻² s ⁻¹ ; Accuracy: ± 1 molm ⁻² s ⁻¹ ; Resolution:1 molm ⁻² s ⁻¹
Wind Direction	Range:0-359° ; Accuracy: ± 3°
Air Pressure	Range: 300.0hPa-1100.0hPa; Accuracy: ± 1hPa
Water Vaporization	Range: 0-100mm; Accuracy: 0.1mm
Rainfall	Range:0-4mm/min; Accuracy: ± 0.1mm; Resolution:0.1mm
CO ₂	Range:0-2000PPM; Volatility: ± (50PPM+ Measurements × 3%); Resolution:1PPM
Light Intensity	Range: 0-200000LUX; Accuracy: ± 2% (0-20000lux); Resolution: 1LUX
Soil Temp	Range:-40° C-100° C; Accuracy: ± 0.3° C; Resolution:0.1° C
Soil Moisture	Range: 0-100%; Accuracy: ± 3%; Resolution: 0.1%
Soil pH	pH range: 1-14pH; Accuracy: ± 0.5
Wind Speed	Range: 0-45m/s; Accuracy: ± (0.3+0.03v)m/s
Total Radiation	Range: 0-2000W/m ² Accuracy: ± 1% (daily accumulation); resolution: 5W / m ²
UV Radiation	Range: 0-6mW/cm ² ; Accuracy: ± 5% (0-3mW/cm ²)

Note: All the technical of our sensor for above weather station and monitor are same.

MOISTURE METER

Grain Moisture Meter	50
Soil Moisture Meter	52
Wood Moisture Meter	53
Tobacco Moisture Meter	53
Dry Hay Moisture Meter	53



GRAIN MOISTURE METER

The grain moisture meter is a portable device suitable for measuring the moisture and temperature of different grains, is ideal for determining important indicators of grain storage and quality. high moisture, especially when paired with high temperatures, increases the risk of mould, mycotoxins, and insect infestation. Very easy to use

Specifications

Measured object: grain and other nonmetal particle samples such as paddy, wheat, corn, bean, rapeseed vegetable seeds etc.
Measure range: 3%~35%
Measure error: $\leq \pm 0.5\%$ (main moisture range)
Repetitive error: $\leq 0.2\%$

Ambient temperature range: 0~40℃

Power: 4 x AA Batteries and DC 9V power adapter

Display: highly bright poor light LCD



LDS-1H

Mainly used for field crops: rice, bean, wheat, rapeseed, corn, barley etc

LDS-1S

Mainly used for: tomato, eggplant, turnip, and other vegetable seeds etc



LDS-1G

Also measure volume-weight, mainly used for crops: rice, bean, wheat, rapeseed, and etc

◆ DHS-16A

Ring quartz tungsten halogen infrared heating source, quick drying of samples; in the drying process, the moisture content lost by the sample is continuously measured and displayed immediately. After the drying procedure is completed, the final moisture content value is locked. It can fully meet the requirements of moisture testing in areas like food, medicine, tobacco, paper making, chemical and mineral industry and so on.



Technical parameter

Measuring accuracy	0.01%	Heating temperature range	50℃~180℃
Measuring range	0.01~100%	Heating source	halogen lamp
Weighing range	0~50g	Display parameters	moisture, time, temperature, weight
Heating time	0 min~99 min	Output interface	standard with RS232 Output interface—convenient connection to printers, computers and other peripheral equipment, in line with FDA/HACCP format requirements
Sensor accuracy	0.001g	Power	220 V/50Hz
Moisture measurement accuracy	$\pm 0.5\%$	Frequency	50Hz $\pm$ 1Hz
Weighing sensor	high-precision heat insulation sensor	Scale size	diameter 100 (mm)

GRAIN MOISTURE METER

◆ TK25G

Features

1. Electrical resistance method
2. Used for fast and accurate measurement of moisture in the process of grains.
3. LCD display
4. Can test 25 kinds of samples, including most of grain seeds.



Measuring range	5-30%	Resolution	0.1
Accuracy	0.5%	Grains	25 groups

◆ GMK 303

Features

1. Electrical resistance method
2. Automatic temperature compensation
3. Average data available
4. LCD display



Measuring range	8.5~30%	Accuracy	0.5%
Resolution	0.1%	Power	4*1.5V battery

◆ PM-8188 new

Features

1. Automatically measure the weight of samples and calculate moisture content ratio.
2. Can test 12 kinds of samples, including most of grain seeds.
3. Can display the numbers and name of varieties, intuitively operation.
4. Automatically shut off the power(the power will be cut off if no operation about 3 minutes), save electricity.
5. Can correct moisture initial value (between the range of -9.9 to 9.9, correct varieties moisture), get rid of environmental impact, improve the measurement accuracy.



Moisture range	3-40%	Display	LCD	Power	4*AA battery
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◆ MINI GAC PLUS

Powerful function

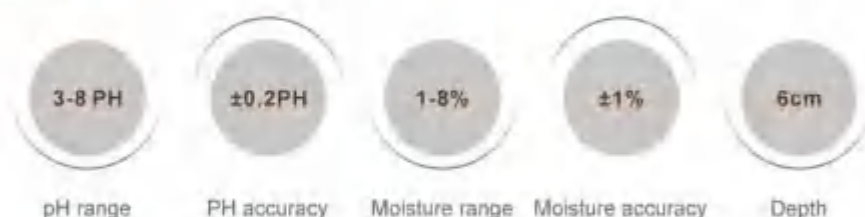
curve global download, can test 450 products, automatic temperature compensation, scrolling menu operation system

Moisture test accuracy	±0.2% (according to grain type)
Volume weight accuracy	±0.5kg/h (according to grain shape)
Moisture test range	5-45% (according to grain type)
Grain measuring temperature	0-50°C automatic temperature compensation
Display mode	LCD displays moisture, temperature and volume-weight
Measuring time	10-15s
Result accuracy	±0.2%
Power	9V alkaline battery



SOIL MOISTURE METER

◆ SDT-60



◆ TZS-1K

Features and Benefits

1. Wireless communication: Data is online displayed on cloud platform and mobile APP in real-time through 2G/ 4G.
2. LCD Screen, it displays the current date and time, the measurement data of each sensor, the number of stored data, and etc.
3. Data Collection methods: Automatic and manual
4. With GPS positioning function
5. Large storage capacity: nearly 30,000 data could be stored on Data Logger, plus a standard 4G memory
6. Lithium battery power supply: 7.4V 2.8Ah lithium battery, with charging protection, low voltage prompt function.
7. Low power consumption design, with system monitoring and protection measures to avoid system crashes;
8. Working temperature: -40-80℃



range 0-100%

Accuracy ±3%

Resolution 0.1%

◆ DM series

Feature and Benefits

1. It used for measuring content of soil, silver sand, chemical combination powder, coal powder and other powder materials.
2. It is applicable of chemical industry and other relevant industry

Measuring range 0-99% or 0-2%

Accuracy 0.5% n

Resolution 0.1 or 0.01

Codes 9 groups



DM400S

Coal moisture meter

DM400C

Chemical material moisture meter

DM400L

Sand moisture meter

◆ YT100

Feature and Benefits

1. Highly sensitive probe accurate measurement.
2. 3.7V Li-ion battery low power consumption and long life.
3. Plug and play convenient and quick measurement.
4. Large screen LCD digital display clear reading.

Measuring range 0-100%

Accuracy 3% (0-53%) 5% (53-100%)

Reaction time <1s

Protection level IP68



WOOD MOISTURE METER

◆ DM series

DM series adopted the high frequency principle based on the introduction of the most advanced technology from foreign country. It can measure wood, concrete, textile and paper with different models.

Measuring range: 0-99% or 0-2%
Resolution: 0.1 or 0.01

Accuracy: 0.5% n
Codes: 9 groups



DM200C

Concrete moisture meter

DM200P

Paper moisture meter

DM200T

Textile moisture meter

DM200W

Timber moisture meter

◆ TK100W

Feature and Benefits

1. Used for measuring moisture content of wood materials (such as sawdust, bamboo powder).
2. It is applicable of paper making, flakeboard, furniture and mechanism of charcoal industry.
3. Large display with back light

Measuring range: 0~80%

Resolution: 0.1

Temperature compensation

RS232/ RS485/ Bluetooth optional



◆ GMK-1010N

Features

1. Electrical resistance method adopted. Easy to operate and quick reading.
2. Automatic temperature compensation.
3. Large digital LCD display.
4. Auto hold & Auto OFF function are available.

Measuring range: 9.0%~50.0%

Accuracy: 0.5%

Resolution: 0.1%

Power: 9V battery



TOBACCO MOISTURE METER

◆ TK100T

The newly designed TK100T utilizes the relationship between moisture content and electrical resistance to effectively measure the moisture content of tobacco quickly and accurately.

Measuring range: 8-40%

Resolution: 0.1

Accuracy: 0.5

Temperature compensation



◆ Ms320

It is a valuable testing instrument during the tobacco collection, processing and when buying and selling.

Measuring range: 8-40%

Resolution: 0.1

Accuracy: 0.5

Pin: Optional 150mm, 15mm, 80mm



DRY HAY MOISTURE METER

◆ Wile26

Features

The bale probe is used to measure moisture content of baled hay. The dish probe is used to measure hay humidity, for instance, in raked hay before baling. In this case the sample is taken for measurement into a clean plastic bucket, and moisture content is measured in the bucket.

Wide moisture measuring range depending on the scale:

loose hay with the dish probe: ca 13~85%

baled hay with the bale probe: ca 10~73%

baled hay with the bale probe, highly compacted bales: ca 10~50%

Repeatability of the measurement results: $\pm 2\%$ points



FOOD SAFTY EQUIPMENT

Pesticide Residue Meter 55

Heavy metal detector 56

Aflatoxin Meter 56

Veterinary Drug Residue Detector 56

Multifunctional Detector for Food Safety 57

Cooking Oil Tester 57



PESTICIDE RESIDUE METER

◆ NY Series

Pesticides are widely used in producing food to control pests such as insects, rodents, weeds, bacteria, mold and fungus, and under the Food Quality Protection Act, we must ensure that all pesticides used on food meet its safety standard. And it is important to note through, that because a pesticide residue is detected on a fruit or vegetable, that does not mean it is unsafe. Very small amounts of pesticides that may remain in or on fruits, vegetables, grains, and other foods decrease considerably as crops are harvested, transported, exposed to light, washed, prepared and cooked.

Features and Benefits

1. Detect products: agricultural and sideline products, daily food, seafood and its products and so on.
2. Detect object: rapid quantitative testing of organophosphorus and carbamates pesticide residues.
3. Applicable units: departments of industry and commerce, hygiene, quality supervision, agriculture, trade and so on; trade markets, supermarkets, wholesale markets for agricultural products, hotels, large dining rooms, bases for agricultural production and so on.

Model	NY-1D	NY-8DA	NY-16DA	NY-8C	NY-12C	NY-16C	NY-2417C	NY-32C
Sample Qty/ time	1	8	16	8	12	16	24	32
Screen	LCD	7-inch color touch screen						
Inhibition rate measurement range	0-100%							
Accuracy	±3%			±10%				
Repeatability	±2%			±5%				
Linear error	±5%			±5%				
Communication interface	USB	Wi-Fi		Rs232 and USB				
storage capacity	500 groups	Unlimited		10000 groups				
Working environment	temperature: 0~40°C, humidity: 35~85%							
Others	Model NY-8DA & NY-16DA accepts sensor expansion							



NY-1D portable



NY-8DA/16DA



NY-C series

◆ NY-16DZ (fully automatic type)

The automatic pesticide residue detector will add reagents, timing, and incubation steps to achieve artificial intelligence automatic mechanized operation. Comprehensively improve the detection efficiency and reduce the human error caused by manual operation. The instrument integrates temperature control and automatic mixing. The three reagents are added independently, no pipeline cleaning is required, no cross-contamination and one-key operation.



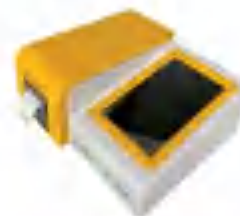
Inhibition rate measurement range	0-100%
Accuracy	±10%
Repeatability	5%
Detection channel	16

Internal data storage capacity	10000 groups
Wavelength	412nm
Communication interface	USB

HEAVY METAL DETECTOR

◆ JT-102JS

The heavy metal detector adopts 8-inch color touch LCD screen, which can be applied to the rapid detection of heavy metal cadmium and lead in grain, vegetables and fruits. The data analysis of colloidal gold detection card is used to realize the quantitative qualitative data. It can save the colloidal gold detection results in digital image, realize the on-site network transmission of detection data and monitoring system, make the detection data more scientific, and avoid the error caused by human interpretation. With built-in lithium battery, it can work directly on site.

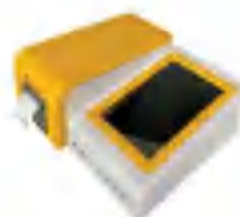


Measurement speed	< 1s	Detection limit of cadmium	0.1ppm
Detection limit of lead	0.2ppm	Communication interface	USB
Detection accuracy	CV value is less than 1% (standard card), inter batch error is less than 3%, sensitivity is higher than 0.001		
Detection output	chroma detection, CT ratio detection, T line detection, C line detection and other automatic judgment functions		

AFLATOXIN METER

◆ JT-102M

Aflatoxin detector adopts 10.1-inch LCD touch screen display, which can be used to detect aflatoxin B1, zearalenone and vomiting toxin in food, feed, Chinese herbal medicine, edible oil, seasoning and other products, fumonisin, T2 toxin, aflatoxin M1.



1. Measurement speed: <0.5s
2. Accuracy: CV< 1% (standard card), batch error <3%, sensitivity > 0.001
3. Output: color detection, CT ratio detection, T line detection, C line detection and other automatic judgment functions.
4. Detection channel: 3; USB interface: 3;

VETERINARY DRUG RESIDUE DETECTOR

◆ JT-108Y

Feature and Benefits

1. Testing scope requirements: livestock and poultry, eggs, aquatic products, honey, feed
2. Test item requirements: antibiotics, hormones, and other drug residues
3. Testing method requirements: immune colloidal gold method
4. Detection signal processing method requirements: high-definition CCD image scanning technology
5. Test item curve increase and decrease requirements: able to add and delete standard curves of different test items and curve import function
6. Detection function: automatically distinguish valid cards, invalid cards, and concentration



Measuring speed	<1s
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Detection accuracy	CV value is less than 1% (standard card), the error between batches is less than 3%, and the sensitivity is higher than 0.001.
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Detection output	Chromaticity detection, CT ratio detection, T-line detection, C-line detection, and other automatic judgment functions.
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USB Interface	3
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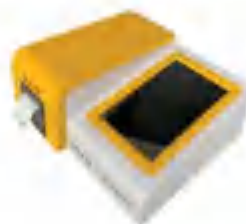
Network communication	wifi, RJ45, Bluetooth
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MULTIFUNCTIONAL DETECTOR FOR FOOD SAFETY

◆ SP-1218D

Features and Benefits

1. Detection function: a new multifunctional food safety comprehensive detection instrument for rapid detection of food additives, non-food additives, fake and inferior food, food safety, condiment quality, food physical and chemical indicators, vegetable and fruit pesticide residues, veterinary drug residues, and aquatic antibiotics Residual, food mycotoxins.
2. Detection module: built-in multi-wavelength spectrum analysis module and immune colloidal gold detection module
3. Display and operating system: 10.1-inch color touch capacitive screen, Android operating system.
4. Hardware requirements: 4-core clocked at 1.6GHz, 2G memory, with large-capacity data storage function, built-in SD card expansion function, large-capacity data storage.



Wavelength	410nm/412nm/465nm/ 518nm/630nm	Colloidal gold detection modules	3 (expandable range 5-10)
Transmittance accuracy	±2.0%	Communication interface	2 USB
Repeatability of transmittance	≤0.2%	Power supply	220V±10%
3-minute stability	≤0.2%	Detection channels	12
Wireless communication interface	Bluetooth, wifi, 3G/4G wireless Internet access		

COOKING OIL TESTER

◆ SP-Y270

Cooking oil tester to be a competent assistant, helping you achieve impeccable quality assurance when it comes to your frying processes. With the Y270 you can take measurements directly in hot oil in a variety of deep fat fryers without any waiting time. The cooking oil tester offers numerous advantages, such as a removable, dishwasher-safe case, an unbreakable oil sensor, easy operation and lots more.



Item	Value
Measuring range	0.0℃ – 200.0 ℃
Temperature resolution	± 0.1℃
Temperature accuracy	± 1℃
TPM	0 – 50%
TPM accuracy	± 1.5%
TPM resolution	± 0.1%
Temperature sensor	PTC sensor
TPM sensor	Capacitance sensor
TPM response time	<15S

FORESTRY EQUIPMENT

Hypometer

Diameter Gauge

Goniometer

Increment Borer

Cocotax Carriers

GPS Track Recorder

Tree Nondestructive Detector

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HYPSONETER

This instrument is a digital height measuring instrument, suitable for measuring the height of trees in forestry surveys, and can also be used for electric power, iron towers, freight transport, etc., where distance measurement, angle measurement, and height measurement are required.



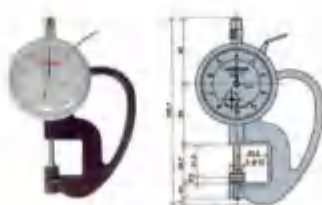
Features and Benefits

1. distance measurement, angle measurement (AD) function.
2. Two-point height measurement (2H) function.
3. Three-point height measurement (3H) function.
4. Use front sight as sight.
5. It is powered by a rechargeable lithium battery, which can be used continuously for about 8 hours when fully charged.
6. If the instrument does not do any operation within the set time (maximum 999S), it will automatically shut down.
7. The high-contrast OLED display screen is adopted, and the display effect is clear.
8. There are two modes of use: hand-held and fixed, and the fixed method needs to be used with a tripod.

Distance Range	0.1M - 20M	Laser Power	5mW
Distance Accuracy	±5mm	Working Temperature	-20℃ ~ +40℃
Angle Range	±60°	Power supply	3.7V/1500mAh rechargeable lithium battery
Angle Accuracy	0.5°	Storage Temperature	-40℃ ~ +60℃
Height Range	0.5M - 35M *	Size and Weight of the meter	180mm × 170mm × 50mm, 550g
Height Accuracy	0.2M		

DIAMETER GAUGE

Measuring object: rubber, plastic, fabric, paper, leather, adhesive tape, film, etc.



G type



H type

G type		H type	
Graduation value	0.01 (mm)	Graduation value	0.01 (mm)
Measuring range	0□10(mm)	Measuring range	0□10(mm)
Determine the depth of the throat	20 (mm)	Determine the depth of the throat	120 (mm)
Probe style	Φ10mm ceramic plane	Probe style	Φ10mm ceramic plane
Pressure measurement below N	1.8N 2.4N	Pressure measurement below N	1.8N 2.4N

GONIOMETER

Features and Benefits

1. High precision bevel protractor declinometer; slope, horizontal and vertical.
2. ABS engineering plastic, which is wear-resisting while durable.
3. Strong magnetic improve the adsorption stability.
4. The dial has a large number and easy reading.
5. It has a gradient and angle comparison table.



Model CJQ-1
Accuracy 0.5 degree
weight 0.3kg

Waterproof Yes
Material plastic and steel ruler

INCREMENT BORER

The increment borer is a classic instrument for fast and reliable results when evaluating age, increment and soundness of trees. Increment borers are also used or decay check-up, pollution control, wood density, chemical penetration control etc.

Lengths are available from 100 mm/ 4" up to 1000 mm/39". Other custom lengths can be offered, ask us for details.



CORETAX HAMMER

1. The Increment Hammer is a rugged and field-adapted tool used to determine tree growth in the past few years.
2. With the pointed end inserted in the stem, a small sample can be extracted from the hollow pipe ejector.
3. To quickly read the sample, the Increment Hammer has graduation up to 5 cm/2".
4. The hammer is made from durable steel with a plastic handle, an ejector with brass details, and a carrying string.



GPS TRACK RECORDER

Features

GPS track recorder can meet the basic functions of outdoor positioning, navigation, outdoor adventure, and traversal. For industry users, the functions of measuring point, stakeout, ranging, and measuring area can also be satisfied.

It can be used in outdoor activities includes

1. EBook Orienteering
2. Wilderness Rescue
3. Wilderness Exploration
4. Finding Campsites
5. Crossing the Desert
6. Finding Water



Forestry

forest restoration, forest tenure reform, returning farmland to forest and grassland

Agriculture

soil testing formula, precision agriculture management, pest control

Communication

network planning, base station positioning, tower positioning, line resource inventory

Geology

Mineral geological survey, engineering, hydrogeological survey, regional geological survey

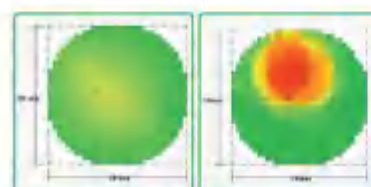
TREE NONDESTRUCTIVE DETECTOR

◆ TOP-900

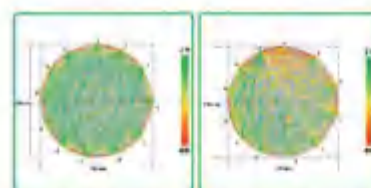
The nondestructive tree detector is a portable pulse detection tomography device which is composed of the detector(include the test box and tool box) and the tree defect imaging software. The device detects the internal defects of trees and is widely used in the detection and location of internal defects of living trees such as ancient trees and street trees.

Features and Benefits

1. The number of sensors is up to 12.
2. The transfer time of the stress wave can be displayed. During the detection, the tested data can be observed in real-time.
3. The imaging software is able to record the transfer data of stress wave during each detect point, the segment diagram of stress wave propagation line, and the Wood interior defect image.
4. The detected report can be printed and the wood cross-section image can be output.



Perfect QR Code Defect QR Code



Perfect Graph Defect Graph

Technical parameter

the speed of stress wave/v/(m/s)	0~3000
The transfer time of stress wave/t(μs)	0<t<65535
The resolution of measurement time/μs	1
Power source	4.2V Li-ion battery
Work time/h	10(continuous work)
Weight	tool box ≤ 8kg; instrument box ≤ 4kg
Tool box	(L) 455 ± 5, (W) 420 ± 5, (H) 115 ± 5
Instrument box	(L) 310 ± 5, (W) 225 ± 5, (H) 136 ± 5
Environment temperature	-10~40℃
Environment humidity	≤ 90%
Sensors	Low noise piezoelectric sensor

Water Quality Detecting Equipment



MULTI-PARAMETER WATER QUALITY ANALYZER

◆ MULP-8C/8D

The multi-parameter water quality measuring instrument uses a single wavelength of light to pass through the sample to be tested, and according to Lambert-Beer's law, the concentration value of a substance contained in the sample is calculated by measuring the absorbance value.



Features and Benefits

- 1 It can measure the concentration, absorbance, and transmittance of nearly 100 parameters in water quality, results can be saved, printed, queried, or uploaded to the computer.
- 2 The measurement wavelength can be selected.
- 3 The multi-parameter water quality analyzer can take backup measures for the curve and data record calibrated by users and can resume operation in case of accidental loss.
- 4 The instrument has its own calibration function, which can effectively eliminate the drift error caused by long-term use.
- 5 The instrument adopts a 5-inch large screen color touch screen operation, easy to operate.
- 6 The light intensity is divided into 16 levels and can be set arbitrarily, which can effectively solve the problem of measuring range expansion caused by signal strength.
- 7 Except for the ex-factory curves, users can add, calibrate, and save curves in the instrument by themselves.
- 8 The curve can be inquired. Except for the curve equation, the standard value of each standard substance, the corresponding absorbance, the calibration time, and the number of the calibration personnel all can be inquired, so as to completely reproduce the state of calibration.

Technical parameter

Products can be customized selected from the following: 340,420,440,470,520,540,560,610,630,660,680,700nm

Accuracy: absorbance error maximum: 0.005; measurement error maximum error is generally 5%, individual: 10%

Absorbance range: -2.00 to 2.000

Power supply: AC220V (165V~240V), 30W

Instrument size: 400x310x158mm

Instrument weight: 5kg

Working environment: temperature: 10-35 ° C; humidity is not more than 90%

COD, NH₃N, TP, TN ANALYZER

◆ CNPN-401C/D

The instrument can directly measure the concentration of COD, ammonia nitrogen, total phosphorus and total nitrogen in water samples. COD testing uses fast digestion optical method; ammonia nitrogen adopts the Nessler reagent method; total phosphorus adopts phosphorus molybdenum blue method; total nitrogen adopts alkaline potassium persulfate method.



Features and Benefits

1. Multi parameter water quality analyzer uses imported high brightness, long life cold light source, which has high stability and repeatability.
2. Separate independent digester and main engine, which does not affect the stability of the optical system.
3. The temperature of digester is controlled and timed automatically by PID with high precision.
4. Free setting of digestion temperature and time for other purposes.
5. Type C can store 300 curves, 1000 records, and type D can store 3500 curves, 100000 records.
6. The optical system of type D is optimized and upgraded and the system is more stable, with better accuracy and stability when measuring.

	COD	NH ₃ N	TP	TN
Measurement Range	5 ~ 2000mg / L (COD can be extended to 20000mg / L)	0.02 ~ 25mg / L	0.00 ~ 10mg / L	0.10 ~ 150mg / L
Indication Error	≤ ±5%	≤ ±3%	≤ ±5%	≤ ±5%
Repeatability	≤ ±3%			
Anti-chlorine Interference	≤2000mg/L (COD measurement)			
Temperature Control Accuracy	≤ ±1.0 °C			
Temperature Control System	can be set from room temperature to 200 °C, COD digestion temperature 165 °C, total phosphorus 120 °C, total nitrogen 125 °C			
Digestion Time	COD is 15 minutes, total phosphorus, total nitrogen is 30 minutes			
Optical Stability	the absorbance drift is less than 0.002A within 20min			
Dimensions	Main unit: 400mm × 310mm × 158mm			
Weight	Main unit: 5kg; Digestion meter: 5.5kg			
Digestion Time	adjustable from 1-9999min, COD: 15min			
Batch Volume	16 water samples (optional 20B, 25B, 36B)			
Power Consumption	<500W			
Display Screen	3.5-inch color touch screen with a resolution of 320x240, Chinese and English display			
Dimensions	355mm × 260mm × 135mm (without protective cover)			
Weight	DIS-16B: 5.5kg (DIS-20B: 6.5kg, DIS-25B: 7.0KG, DIS-36B: 8.0kg)			

TURBIDITY, CHROMATICITY, SUSPENDED MATTER METER

◆ HCOD-3M

Application Area

Applicable to the measurement of drinking water, surface water, groundwater and other water quality.

Features and Benefits

1. Using cold light and monochromatic light as the light source, the optical stability is excellent and will not be interfered with by various kinds of light.
2. Easy to operate, high measurement accuracy
3. Large-screen LCD Chinese display, all settings, calibration, recording operations are all implemented in the same integrated environment.
4. With the technology of V/F conversion, software redundancy, and software trap, it has strong anti-interference.
5. Can store 10 working curves and 500 historical records, users can calibrate the calibration curves by themselves, and data will not be lost even when the power is cut off.
6. With printing function: users can print the test record immediately or query records to print.



Measurement range	Turbidity	Chroma	Suspended Matter
	0.00~400NTU	0.0 to 500 CPU	0~1000mg/L
Accuracy	$\leq \pm 2\%$ (F.S)	$\leq \pm 3\%$ (F.S)	$\leq \pm 2\%$ (F.S)
Repeatability	$\leq 3\%$		
Optical Stability	instrument absorbance value within 20min drift less than 0.002A		
External dimensions	host 340 × 250 × 130mm		
Weight	4kg		
Working Environment	Temperature 5 to 40 ° C, $\leq 85\%$ RH		
Power supply	AC (220 ± 22) V; (50 ± 0.5) Hz		
Others	No significant vibration and electromagnetic interference, avoid direct exposure to sunlight		

SINGLE PARAMETER HEAVY METAL / COMPOUND TESTER

◆ HCOD-6M

Using narrow-band laser technology to produce a specific single wavelength, the absorbance is measured by colorimetry under the control of high-performance single-chip computer. According to Lambert Beer law, the instrument automatically calculates the concentration of the measured parameters.

Features and Benefits

1. Using cold light and monochromatic light as light sources, the optical stability is excellent and the measurement accuracy is guaranteed.
2. With a factory preset curve that can be queried, the user can calibrate the curve by himself.
3. LCD large-screen LCD display, all setting, calibration, and recording operations are realized in the same integrated environment.
4. Using software redundancy, software trap, and other technologies, it has strong anti-interference.

Technical parameter

• Models customizable

• Wide range of measurement parameters:

Heavy metals: copper, manganese, nickel, aluminum, hexavalent chromium, total chromium, iron, cadmium, zinc, barium, mercury, beryllium, antimony, lead, molybdenum and silver Boron.

Inorganic salts: sulfate, phosphate, nitrate, nitrite, cyanide, sulfide, fluoride, chloride ion (chloride), silica Iodine, arsenic.

Alkalinity, Residual chlorine

Hardness

Chlorine dioxide, Available chlorine, Organic class, Ozone, Anionic surfactant



MULTI-PARAMETER WATER QUALITY ANALYZER

◆ GW-2000

The equipment can be used for water quality measurements of surface water, underground water, source water, drinking water, sewage discharge outlet, ocean and other different water bodies.

Working Principle

PH and conductivity are measured by electrochemical sensors; turbidity is measured by light scattering or scattering + transmission; others are measured by optical colorimetry.



Features and Benefits

1. The wavelength is automatically selected when measuring the sample and no calibration is required.
2. It is operated with a 5-inch large-screen color touch screen and is user-friendly.
3. The multi-parameter water quality detector is convenient for carrying out on-site inspections.
4. With the data storage and deletion function, it can store curves and data with timestamps, and can store 300 curves and 1000 records.
5. With a USB interface and host computer data acquisition software, data records can be transferred to the computer.
6. Cold light source, narrow-band interference optical system, good optical stability.
7. Data power-off protection function with record printing function.
8. It is powered by a rechargeable lithium battery and has a battery detection function.
9. Imported high-performance turbidity and colorimetric sensors to make low-range turbidity and colorimetric measurements more accurate.
10. We can expand and customize measurement items according to user requirements, in order to achieve the best price/performance ratio.
11. One-click recovery, one-click recovery when factory curves and user curve data records are lost due to accidents.
12. With various security measures, you can set the boot and system settings to enter the password.
13. With its own calibration function, self-calibration during operation can effectively eliminate the drift error caused by long-term use.

Measurement items

Cod (manganese method)	Iron (high and low range)
Ammonia nitrogen	Nickel (low)
Residual nitrogen (high and low range)	Nickel (high)
Total chlorine (high and low range)	Cadmium
Residual chlorine (DPD method)	Hexavalent chromium
Total chlorine (DPD method)	Total chromium
Chlorine dioxide (high and low range)	Molybdenum
Available chlorine	Silver
Chlorite	Iodide
Phosphate (high and low range)	Boron
Sulfate	Arsenic (high and low range)
Nitrite nitrogen (high and low range)	Beryllium
Nitrate nitrogen	Antimony
Cyanide	Mercury
Bromide	Aluminium
Sulfide	Lead (high and low range)
Fluoride	Manganese (high)
Volatile phenol (high and low range)	Manganese (low)
Formaldehyde	Zinc
Silicon dioxide	Anionic surfactant
Hydrazine	PH (electrode method)
Ozone	Dissolved oxygen (colorimetry)
Aniline compounds	Dissolved oxygen (electrode method)
Total hardness (high and low range)	Conductivity
Total alkalinity (high and low range)	Suspended solids
Chloride ion	Turbidity
Copper (high and low range)	Chroma

PORTABLE WATER QUALITY ANALYZER (COD、NH3N、TP、TN)

◆ PWN-840A

High temperature sealed catalytic digestion and monochromatic light are used for colorimetric measurement. The instrument is compact and easy to carry. It has its own lithium battery. It can use the same branch pipe for digestion and colorimetry without external power supply.

Features and Benefits

1. The digester is separated from the analyzer, which does not affect the measurement accuracy. The temperature PID automatically controls temperature and timing.
2. Using high-performance, low-power 16-bit single-chip system, the standby time of the instrument can be more than 6 months.
3. The instrument is small and convenient for on-site measurements. Supporting a variety of power supply methods: including automobile cigarette lighter, high-capacity portable lithium battery and 220V power supply, to get rid of the trouble of not being able to detect the conventional power source in the field.
4. Using imported cold light source, equipped with narrow-band filter system, the optical stability is very strong.
5. LCD large screen Chinese display, easy to operate.
6. Data will not lose even when power is cut off.
7. 30 standard curves and 199 measurements can be saved (including residual chlorine value, absorbance value and light transmittance with time label of year, month, day, hour, minute and second).
8. With USB port, which can be connected to computer for records reading or printing.
9. The main engine shell is made of molded ABS material and IP65 design, with good anti-corrosion, waterproof and dust-proof performance.
10. The digester can be equipped with portable lithium battery with high capacity, which can satisfy the measurements of water samples in large quantities.
11. High-strength suitcase, smart, strong, easy to carry.



Technical Parameter

Measurement Range	COD	NH3N	TP	TN
	5~2000mg/L	0.02~25mg/L	0.00~10mg/L	0.05~100mg/L
Indication error	≤±5%	≤±3% (F.S)	≤±5% (F.S)	≤±5%
Repeatability	≤3%			
Temperature control accuracy	±0.5℃			
Temperature control time	adjustable from 1 to 999min			
Digestion time	COD is 15 min, total phosphorus total nitrogen is 30 min			
Batch volume	4 water samples (or 16 water samples)			
Anti-chlorine interference	≤2000mg/L (COD measurement)			
Wavelength range	COD (420nm and 610nm), ammonia nitrogen (420nm), total phosphorus (700nm), total nitrogen (340nm)			
Optical stability	the instrument absorbance value drifts less than 0.002A within 20min			
Dimensions	COD measuring instrument 80mm×230mm×55mm; Digestion instrument 105mm×160mm×90mm			
Weight	Host 0.5kg digestion instrument, 1kg			
Host power consumption	current <40uA, digester power consumption: <55W			
Working environment	Ambient temperature: 5 to 40℃, ≤85% RH			
Power supply	Main unit: Built-in lithium battery; Digestion instrument: car cigarette lighter, portable lithium battery or 220V power supply			
Others	No significant vibration and electromagnetic interference, avoid direct sunlight			

AQUACULTURE ANALYZER

◆ TBRD-501/801

The instrument is suitable for the determination of water quality in aquaculture. The main measurement parameters include: salinity, pH, dissolved oxygen, ammonia nitrogen, sulfide, nitrite, mercury, cadmium and other parameters.

Features and Benefits

1. With imported high-performance, long-life light source and high stability optical system, the instrument has higher repeatability.
2. 10 standard curves and 500 measurements can be saved respectively, data will not lose even when power is cut off.
3. LCD large screen LCD Chinese display, convenient and intuitive operation.
4. Printing function: the testing record can be printed immediately, and the query history record also can be printed.
5. With USB interface, can be connected to computer.

Technical Parameter

Measurement range	pH	Salinity	Dissolved oxygen	Ammonia nitrogen
	5.00-8.00	0.0-26.0	0.10-10.0mg/L	0.02-25.0mg/L
	Nitrite	Sulfide	Mercury	Cadmium
	0.02-5.00mg/L	0.005-1.00mg/L	0.002-0.5mg/L	0.01-0.5mg/L
Dimensions	340mm × 250mm × 130mm			
Weight	4kg			
Indication error	≤ ± 5% (F.S)			



INTELLIGENT WATER QUALITY BACTERIA DETECTOR

◆ GH-XJ200

The multifunctional culture medium scaffold can be used with prefabricated culture medium for the detection of total bacteria, Escherichia coli, fecal Escherichia coli, Escherichia coli, fecal streptococcus, Salmonella and other items.

Features and Benefits

1. Use dry powder medium or prefabricated nutrition.
2. Automatic vacuum pump and filter kit, 0.45 can be used μ M pore size filter membrane can quickly vacuum filter water samples on site to complete the collection of microbial samples.
3. Multifunctional culture medium support, which can place a variety of different forms of prefabricated microbial culture media at the same time, and can place 7 nutrient plates or 20 aluminum dishes at the same time.
4. It has regular reminder and can set the automatic shutdown function after digestion.
5. The filter components can be quickly sterilized by high temperature flame sterilization at the sampling site.

Technical Parameter

Portable	small size, easy to carry, equipment and consumables are placed in a solid portable box, suitable for on-site use.
Culture conditions	30 groups of custom culture temperatures can be set. The optional temperature range is 20 ~ 50 °C, and the culture duration is custom. It supports the microbial recovery mode.
Temperature control mode	laser balanced thermistor pair is used with automatic temperature identification function to support cooling function and temperature calibration function.
User interaction	screen prompt or voice prompt, supporting multiple languages such as Chinese and English.



BENCHTOP METERS

◆ 200E Series

Features and Benefits

1. High resolution LCD display screen 6.0 inches.
2. Multi-reading feature allows auto-read and continuous-read.
3. Automatic/Manual temperature compensation ensures accurate results.
4. Auto-hold feature senses and locks the measurement endpoint.
5. Data storage 50 sets for each parameters.
6. Reset feature automatically resumes all settings back to factory default options.
7. IP54 waterproof.

PH200E pH Meter

1. 1-3 points calibration with standard recognition.
2. Automatic/Manual temperature compensation ensures accurate results.

EC200E Conductivity Meter

1. 1 point calibration with standard recognition.
2. Cell constant is settable.
3. Automatic/manual temperature compensation ensures accurate results.

PH200EM pH Meter

1. 1-3 points calibration with standard recognition.
2. Manual temperature compensation ensures accurate results.

EC200EM Conductivity Meter

1. 1 point calibration with standard recognition.
2. Cell constant is settable.
3. Manual temperature compensation ensures accurate results.



Model		PH200E	PH200EM
	Parameters	pH/Temp.(mV)	pH/mV
pH	Range	-2.00 to 18.00 pH	
	Resolution	0.01pH	
	Accuracy	±0.01 pH	
	Calibration Points	Up to 3	
	Standard recognition	NIST buffers	
mV	Range	-1999 to 1999 mV	
	Resolution	1 mV	
	Accuracy	±0.1 %FS	
Temperature	Range	-5 to 110 °C, 23 to 230 °F	N/A
	Unit	°C	N/A
	Resolution	0.1	N/A
	Accuracy	±0.2	N/A

Model		EC200E	EC200EM
Parameters		EC/Temp. (TDS)	EC(TDS)
pH	Range	0.00 μ S/cm to 200 mS/cm	
	Resolution	0.01 μ S/cm minimum; changed with range	
	Accuracy	± 1.0 % FS	
	Reference Temperature	25 °C	
	Calibration Points	Up to 1	
mV	Standard recognition	146.5 μ S/cm, 1408 μ S/cm; 12.85mS/cm, 111.3mS/cm	
	Range	0.00mg/L ~ 100g/L	
	Resolution	0.01mg/L minimum; changed with range	
Temperature	Accuracy	± 1.0 % FS	
	Range	- 5 to 110 °C, 23 to 230 °F	N/A
	Unit	°C	N/A
	Resolution	0.1	N/A



600L SERIES BENCHTOP METERS

Features and Benefits

1. Color High contrast LCD touchscreen.
2. Intelligent operation system provides features including user management, calibration management, electrode management, method management, data management and etc.
3. Multi-reading feature allows auto-read, timed-read and continuous-read.
4. Automatic/Manual temperature compensation ensures accurate results.
5. Auto-hold feature senses and locks the measurement endpoint.
6. Data capacity of up to 1000 sets for each parameter (GLP-compliant).
7. Data analysis feature helps user review, compare and recalculate results.
8. Data can be transferred to PC or printer by USB or RS-232 communication interfaces.
9. Automation measurement



◆ M600L

Technical Parameters

pH	Range	-2.000 to 20.000 pH	TDS	Range	0.000 mg/L ~ 1000 g/L
	Resolution	0.1, 0.01, 0.001 pH		Resolution	0.001 ppm minimum changed with range
	Accuracy	±0.002 pH		Accuracy	±0.5%
mV/ORP	Range	-2000.00 to 2000.00 mV	Salinity	Type	NaCl%
	Resolution	0.1, 0.01 mV		Range	(0.00 ~ 8.00)%
	Accuracy	±0.1 mV or ±0.03 %		Resolution	0.01%
pX	Range	2.000 to 20.000 pX		Accuracy	±0.1%
	Resolution	0.1, 0.01, 0.001 pX	Dissolved Oxygen Concentration	Sensor Type	Polarographic
	Accuracy	±0.002 pX		Range	0.00 to 99.99 mg/L
ISE	Range	0~19990		Resolution	0.01 mg/L
	Units	mol/L, mmol/L, g/L, mg/L, µg/L		Accuracy	±0.1 mg/L
	Resolution	Up to 4 significant digits	% Saturation	Range	(0.0 to 500)%
	Accuracy	±0.3 %		Resolution	0.10%
Conductivity	Range	0.000 µS/cm to 3000 mS/cm		Accuracy	±10.0 %
	Resolution	0.001 µS/cm minimum changed with range	Temperature	Range	-5 to 130.0°C
	Accuracy	±0.5 % FS		Unit	°C
Resistivity	Range	5.00 Ω·cm ~ 100.00 MΩ·cm		Resolution	0.1
	Resolution	0.01 Ω·cm minimum		Accuracy	±0.1
	Accuracy	±0.5 % FS	Data management	Data storage	1000 Groups
			General	Power	AC Adapter, 100-240 VAC input DC24V output

M600L

pH/EC/ISE/DO/Temp.
(mV/ORP/pX/
Resistivity/TDS/Sal./
DO Saturation)

PH600L

pH/Temp.
(mV/ORP)

EC600L

EC/Temp.
(Resistivity/TDS/Sal.)

ISE600L

pH/ISE/
Temp. (mV/ORP/pX)

DO600L

DO/Temp.
(DO Saturation)

PORTABLE METER

◆ 310F Series

Features and Benefits

1. LCD display screen, 3.5 inches
2. Multi-reading feature allows auto-read, timed-read and continuous-read.
3. Automatic/Manual temperature compensation ensures accurate results.
4. Auto-hold feature senses and locks the measurement endpoint.
5. Data capacity of up to 500 sets for each parameters (GLP-compliant).
6. Support for USB communication.
7. Auto-power off feature effectively extends the battery service life.
8. Reset feature automatically resumes all settings back to factory default options.
9. IP65 waterproof.



◆ M310F

Technical Parameters

pH	Range	-2.00 to 20.00pH	TDS	Range	0.00mg/L - 300g/L
	Resolution	0.1, 0.01 pH		Resolution	0.01mg/L minimum changed with range
	Accuracy	±0.02 pH		Accuracy	±1.0%
mV	Range	-2000.00 to 2000.00 mV	Salinity	Range	(0.00 - 8.00)%
	Resolution	0.1		Resolution	0.01%
	Accuracy	±0.3 mV or ±0.1 % of reading whichever is greater		Accuracy	±0.2%
pX	Range	-2.00 to 20.00	Dissolved Oxygen Concentration	Sensor Type	Polarographic
	Resolution	0.1, 0.01 pX		Range	0.00 to 50.00 mg/L
	Accuracy	±0.02 pX		Resolution	0.01 mg/L
ISE	Range	1E-9 to 9.999E9	% Saturation	Accuracy	±0.3mg/L
	Units	mol/L, mmol/L, g/L, mg/L, µg/L		Range	(0.0 to 300.0)%
	Accuracy	±0.5 %		Resolution	0.1%
	Calibration Points	Up to 5		Accuracy	±10.0 %
Conductivity	Range	0.000 µS/cm to 500 mS/cm	Temperature	Range	-5 to 110 °C, 23 to 230 °F
	Resolution	0.001 µS/cm minimum changed with range		Unit	°C, °F
	Accuracy	±1.0 % FS		Resolution	0.1
Resistivity	Range	5.000 Ω·cm - 20.00MΩ·cm		Relative Accuracy	±0.2
	Resolution	0.01Ω·cm minimum	Data management	Data storage	500 results each
	Accuracy	±1.0 % FS	General	Power	Rechargeable Lithium batter AC Adapter 100-240 VAC Input, DC5V output

M310F

(mV/pX/Resistivity/
TDS/Sal. /
DO Saturation)

M310F-A

pH/EC/ISE/Temp.
(mV/pX/Resistivity/
TDS/Sal.)

PH310F

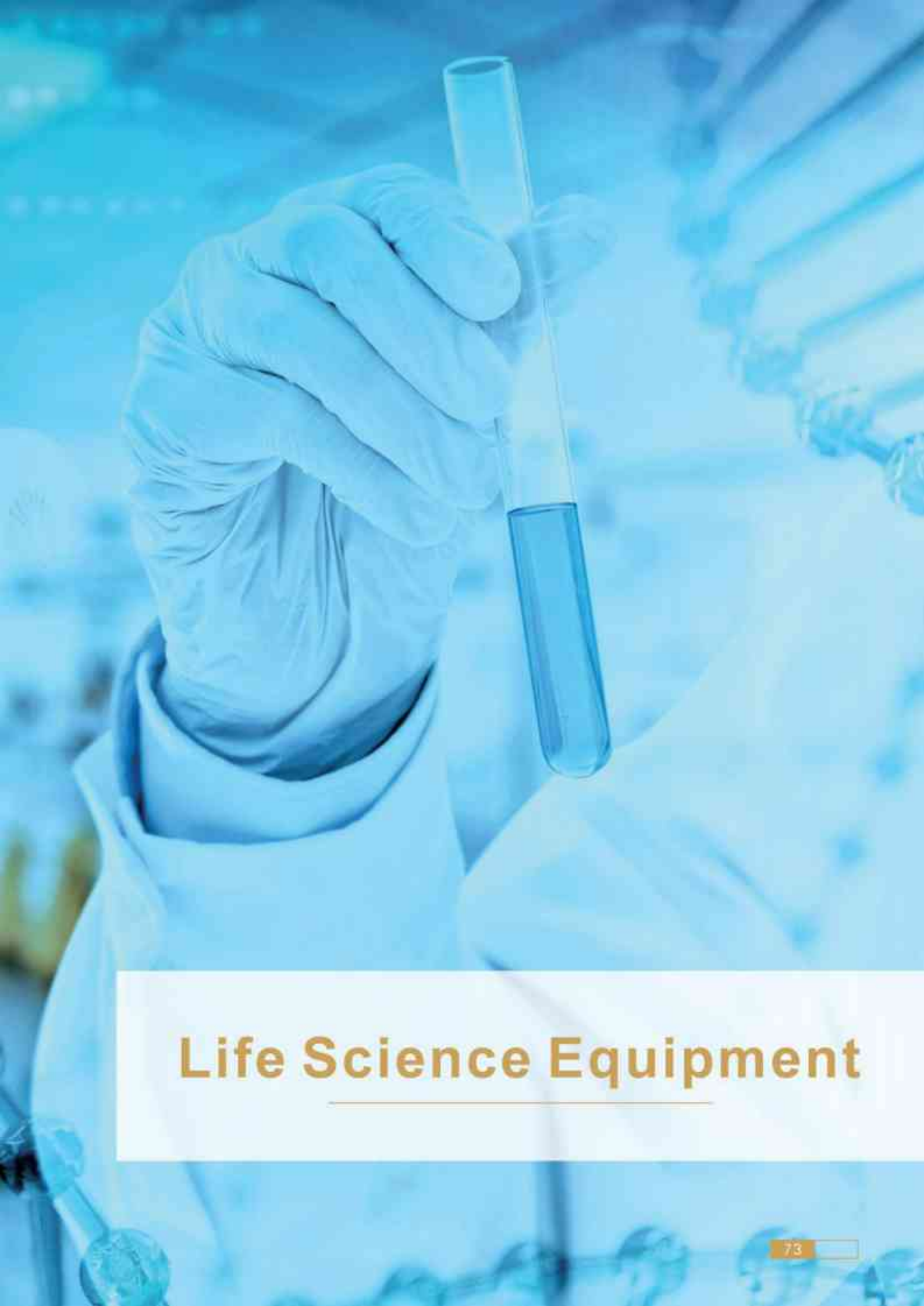
pH/Temp.
(mV)

EC310F

EC/Temp.
(Resistivity/ TDS/Sal.)

DO310F

DO/Temp.
(DO Saturation)



Life Science Equipment

◆ Real Time PCR Q3200-series

Application

the product can be used for real-time detection in pasture, forest farm, breeding farm and water source. It is used for rapid diagnosis of disaster and epidemic disease, inspection and quarantine in the field of food safety, and scientific research in biological laboratories.

Feature and Benefits

1. Four channels and double 16-well blocks design, can run two different programs at the same time.
2. Small size, light weight, easy to carry.
3. Powerful software analysis function, which can be used for Quantitative Analysis, Melting Curve Analysis, Genotyping, Relative quantification, and etc.
5. 20G flash memory can save 40,000 experimental data.
6. Imported 32 bundled optical fibers are used to collect fluorescence from the side to increase the intensity of fluorescence signal and reduce light conduction damage.
7. Black reaction block to avoid background noise.
8. The electromagnetic lock cover technology prevents the hot lid from accidentally opening.
9. Front shutdown button makes file data more secure.
10. Constant current control circuit makes power output smooth and extends Peltier life, also improves temperature control accuracy.
11. It has the protection functions of over-current, over temperature, power-off data self recovery, etc.



Model	Q3202	Q3204
Excitation wavelength	F1:470nm F2:523nm	F1:470nm F2:523nm F3:571nm F4:628nm
Emission wavelength	F1:525nm F2:571nm	F1:525nm F2:571nm F3:612nm F4:692nm
Factory Calibrated Dyes	F1:FAM/SYBR Green I F2:HEX/VIC/JOE/TET	F1:FAM/SYBRGreen I F2:HEX/VIC/JOE/TET F3:ROX F4:CY5
Sample Capacity	32 × 0.2ml(4 × 8well, dual block)	
Consumable	Clear 0.2 ml PCR tube /8-tube strips	
Reaction Volume	10-100 μl	
Temperature control technology	Marlow customized Peltier allow 1,000,000 cycles	
Temperature Range	0-100℃(Resolution:0.1℃)	
MAX. Ramp Rate	5℃/s	
Temperature fluctuation	±0.1℃	
Uniformity	±0.25℃	
Accuracy	±0.25℃	
Hot Lid Temperature	30-110℃ (Adjustable, default 105℃)	
Temperature Control	Block/Tube	
Excitation	Long life LED	
Detection	High sensitivity photoelectric detector	
Dynamic Range	1-1010 Copies	
Sensitivity	1 copy	
Feature function	Quantitative/qualitative analysis, Melting curve, Genotyping	
Data Export Formats	excel, csv, txt	
Printing	Report can be printed (optional USB thermal printer)	
Control Method	7 inch color TFT touch screen, Can be connected to computer control	
Communication	USB2.0	
Voltage	220VAC, 50Hz	
Power	DC15V 255W	

◆ Real Time PCR Q1600-series

Application

the product can be used for real-time detection in pasture, forest farm, breeding farm and water source. It is used for rapid diagnosis of disaster and epidemic disease, inspection and quarantine in the field of food safety, and scientific research in biological laboratories.

Feature and Benefits

1. Double channels and double 8-well blocks design, can run two different programs at the same time.
2. Small size, light weight, easy to carry.
3. Powerful software analysis function, which can be used for Quantitative Analysis, Melting Curve Analysis, Genotyping, etc.
4. 20G flash memory can save 40,000 experimental data.
5. Adopting side scan technology, the detection distance is close, and the fluorescence acquisition signal is stable.
6. Black reaction block to avoid background noise.
7. Adopt the same acquisition optical path to improve the repeatability.
8. The electromagnetic lock cover technology prevents the hot lid from accidentally opening.
9. Front shutdown button makes file data more secure.
10. Constant current control circuit makes power output smooth and extends Peltier life, also improves temperature control accuracy.
11. It has the protection functions of over-current, over temperature, power-off data self recovery, etc.
12. It can be supported for battery power supply, suitable for quick inspection and field inspection.



Model	Q1601	Q1602
Excitation wavelength	F1:470nm	F1:470nm F2:523nm
Emission wavelength	F1:525nm	F1:525nm F2:571nm
Factory Calibrated Dyes	F1: FAM/SYBR Green I	F1: FAM/SYBR Green I F2: HEX/VIC/JOE/TET
Sample Capacity	16 × 0.2ml (2 × 8well, dual block)	
Consumable	Clear 0.2 ml PCR tube /8-tube strips	
Reaction Volume	10–100 μl	
Temperature control technology	Marlow customized Peltier allow 1,000,000 cycles	
Temperature Range	0–100°C (Resolution:0.1°C)	
MAX. Ramp Rate	6°C/s	
Temperature fluctuation	±0.1°C	
Uniformity	±0.25°C	
Accuracy	±0.25°C	
Hot Lid Temperature	30–110°C (Adjustable, default 105°C)	
Temperature Control	Block/Tube	
Excitation	Long life LED	
Detection	High sensitivity photoelectric detector	
Dynamic Range	1–10 ¹⁰ Copies	
Sensitivity	1 copy	
Feature function	Quantitative/qualitative analysis, Melting curve, Genotyping	
Data Export Formats	excel, csv, txt	
Printing	Report can be printed (optional USB thermal printer)	
Control Method	7 inch color TFT touch screen, Can be connected to computer control	
Communication	USB2.0	
Voltage	220VAC 50Hz	
Power	DC15V 255W	

◆ PCR Amplification Instrument TP-32G/ 96G

PCR (Polymerase chain reaction), namely polymerase chain reaction, refers to the process of replicating the sub strand DNA complementary to the parent strand template DNA in vitro through denaturation, annealing, extension and other steps with the parent strand DNA as the template and specific primers as the extension starting point under the catalysis of DNA polymerase. It is a DNA synthesis and amplification technology in vitro. So it can quickly and specifically amplify any target DNA in vitro. It is a major development of molecular biology and this technology has greatly promoted the progress of genetic discovery and made the relevant decisive technologies simple and repeatable. PCR instrument is the core equipment to complete PCR reaction. PCR technology is applicable to the fields of molecular biology, medicine, food industry, judicial science, biotechnology, environmental science, microbiology, clinical diagnosis, epidemiology, genetics, gene chip, gene detection, gene cloning, gene expression and so on.



Feature and Benefits:

1	Optional temperature control mode	6	Excellent temperature uniformity to ensure the best experimental results
2	Fast temperature change rate to save experimental time	7	The latest generation of 7-inch touch screen, curve graphics display program
3	Maximum 30 °C gradient (c-96 and c-32 instruments are not applicable)	8	Power failure automatic protection
4	Hot start function	9	The latest USB flash disk interface, download the program through USB flash disk
5	The hot cover pressure is adjustable to prevent liquid volatilization, so as to adapt to various PCR pipes	10	Imported core parts with guaranteed quality and service life

Technical parameter

1. Temperature rise and fall Technology: the latest generation of semiconductor technology
2. Sample table capacity: 0.2ml * 96 hole or 0.5ml * 96 hole or 0.2ml * 96 hole + 0.5ml * 77 hole, in-situ tray
3. LCD: 7-inch touch screen, curve graphic display program
4. U disk function: unlimited download of program through U disk
5. Language: both Chinese and English
6. Communication interface: USB2.0 RS232
7. Sample table temperature: 0oc-100oc
8. Heating speed: 4oC / S
9. Cooling rate: 4oC / S
10. Time increasing / decreasing: 1-120 seconds, long PCR experiment can be done
11. Temperature increase / decrease: 0.1-10.0 °C, touchdown PCR experiment can be done
12. Adjustable temperature change speed: Yes
13. Temperature control mode: analog tube + sample table
14. Maximum temperature points: 40, multiple nested cycles
15. Temperature uniformity of sample table: $\leq \pm 0.2oc$ (30 seconds after reaching the set temperature point)
16. Temperature accuracy of sample table: $\leq \pm 0.1OC$ (30oC - 100oC)
17. Program storage: The instrument can store 20000 programs, and unlimited programs can be downloaded through USB flash disk
18. Accuracy of gradient temperature: $\leq \pm 0.1\text{ }^{\circ}\text{C}$ (35 °C - 99.9 °C)
19. Gradient temperature uniformity: $\leq \pm 0.2\text{ }^{\circ}\text{C}$ (30 seconds after reaching the set temperature point)
20. Gradient range: 30 °C - 99.9 °C
21. Gradient temperature difference range: maximum 30 °C
22. Gradient temperature point distribution: 12 columns (vertical direction)
23. Power off protection: Yes
24. 4oC insulation: Yes
25. Heat cover height: stepless adjustable, pressure adaptive PCR tube and tray
26. Heat cover temperature: 30 °C - 105 °C adjustable
27. Automatic closing function of hot cover: when the temperature of sample table is lower than 30. °C, the hot cover will close automatically. At the end of the program, the hot cover closes automatically
28. Input power: 600W

◆ REPURE SERIES THERMAL CYCLER RePure series

Feature and Benefits:

1. Reinforced aluminum module with anodizing technology can keep rapid heating-conducting property and have enough corrosion resistance.
2. High heating and cooling rate, max. Ramping rate 8 °C/s
3. Self-adapting pressure hot lid makes closing lid and tightening lid in one step.
4. Air channel is in front and back and it allows machine placed side by side.
5. Built-in 11 standard program file template, can quickly edit the required files.
6. The running program and left time can be displayed in real time, allow to edit file when program is running.
7. One-click quick incubation function can meet experiment's needs such as denaturation, enzyme cutting/enzyme-link and ELISA.
8. Hot lid temperature and hot lid work mode can be set to meet different experiment's need.
9. Automatic restart after power failure. When power is restored it can continue to run unfinished program.
10. Support USB to store and copy PCR data, user can control PCR by USB mouse.
11. WIFI module built-in, one unit can control multiple PCR machine through computer or cell phone with internet connection.
12. Email notification after experiment is over.



Technical Parameter

Model No.	RePure-A	RePure-A(F)	RePure-A(384)	RePure-B	RePure-C
Capacity	96×0.2ml	96×0.2ml	384 well	6×16×0.2ml	96×0.2ml
Tube	0.2ml tube, 8 strips, Half skirt96 wells plate, No skirt 96 wells plate	0.2ml tube, 8 strips, Full 96 wells plate, Half skirt96 wells plate, No skirt 96 wells plate	384 PCR microplate	0.2ml tube, 8 strips, Half skirt96 wells plate, No skirt 96 wells plate	
Temperature Range	0-105℃				
MAX. Ramp Rate	5℃/s	6℃/s	5℃/s	6℃/s	8℃/s
Uniformity	≤±0.2℃				
Accuracy	≤±0.1℃				
Display Resolution	0.1℃				
Temperature Control	BlockTube				
Ramping Rate Adjustable	0.1-5℃	0.1-6℃	0.1-5℃	0.1-6℃	0.1-8℃
Gradient Temp. Range	30-105℃				
Gradient Type	Normal Gradient			Dynamic Gradient	Two-Dimensional Gradient
Gradient Spread	1-42℃			six zone, each zone is 0.1-5℃.	Horizontal: 1-30℃ Vertical: 1-24℃
Hot Lid Temperature	30-115℃				
Number of Programs	20000 +(USB FLASH)				
Max. No. of Step	30			40	
Max. No. of Cycle	100				
Time Increment/Decrement	1 Sec - 600 Sec				
Temp. Increment/Decrement	0.1-10.0℃				
Hold at 4℃	Forever				
Power Supply	100-240VAC , 50/60Hz , 600 W			100-240VAC , 50/60Hz , 600 W	100-240VAC , 50/60Hz , 1200 W

◆ THERMAL CYCLER GET Series

Feature and Benefits

1. 8 long service life Peltier heating units and form 3 circuits to control 3 temperature zones.
2. Reinforced aluminum module with anodizing technology can keep rapid heating-conducting property and have enough corrosion resistance.
3. High heating and cooling rate, max. Ramping rate 5 °C/s;
4. 3 blocks independently controlled and can run 3 different PCR gradient programs simultaneously
5. Stepless adjustable hot lid with pressure-protection, fit tubes of different heights to avoid tube melt and evaporation.
6. Built-in 11 standard program file template, can quickly edit the required files.
7. One-click quick incubation function can meet experiment's needs such as denaturation, enzyme cutting/enzyme-link and ELISA.
8. Internal flash memory for 10000 typical PCR files in free configurable folders.
9. Hot lid temperature and hot lid work mode can be set to meet different experiment's need.
10. Automatic restart after power failure. When power is restored it can continue to run unfinished program.
11. GLP report records every step to provide accurate data support for experiment result analysis.
12. Built-in WIFI module, one machine can control multiple PCR machines at the same time through mobile APP or PC software.
13. Support email-alert function when experiment is over.



Technical Parameter

Model No.	GET3X (General)	GET3XG (Gradient)
Capacity	3 × (32 × 0.2ml)	
Temperature Range	0–100℃	
Heating Rate	5℃/s	5℃/s
Cooling Rate	4℃/s	4℃/s
Uniformity	≤ ± 0.3℃	≤ ± 0.3℃
Accuracy	≤ ± 0.2℃	≤ ± 0.2℃
Display Resolution	0.1℃	
Temperature Control	BlockTube	
Ramping Rate Adjustable	0.1–5℃	0.1–5℃
Gradient Temp. Range	–	30–100℃
Gradient Spread	–	1–30℃
Hot Lid Temperature	30–110℃	
Hot Lid Height Adjustable	Stepless Adjustable	
Number of Programs	10000 +(USB FLASH)	
Max. No. of Step	30	
Max. No. of Cycle	100	
Time Increment/Decrement	1 Sec – 600 Sec	
Temp. Increment/Decrement	0.1–10.0℃	
Communication	USB2.0 , LAN,wifi	
Power Supply	85–264VAC , 47–63Hz , 600 W	

◆ Touch series THERMAL CYCLER GE Series

Feature and Benefits

1. 8 pcs long service life Peltier heating units and form 4 circuits to control 4 temperature zones and allow double block gradient function;
2. Reinforced aluminum module with anodizing technology can keep rapid heating-conducting property and have enough corrosion resistance;
3. High heating and cooling rate, max. Ramping rate 5 °C/s;
4. Two blocks independently controlled and can run 2 different PCR programs simultaneously;
5. Stepless adjustable hot lid with pressure-protection, fit tubes of different heights to avoid tube melt and evaporation;
6. Built-in 11 standard program file template, can quickly edit the required files;
7. One-click quick incubation function can meet experiment's needs such as denaturation, enzyme cutting/enzyme-link and ELISA;
8. Internal flash memory for 10000 typical PCR files in free configurable folders;
9. Hot lid temperature and hot lid work mode can be set to meet different experiment's need;
10. Automatic restart after power failure. When power is restored it can continue to run unfinished program;
11. GLP report records every step to provide accurate data support for experiment result analysis;
12. support U disk to get PCR data, to update software, and USB mouse can also be used to control the PCR instrument;
13. Built-in WIFI module, one machine can control multiple PCR machines at the same time through mobile APP or PC software;
14. Support email-alert function when experiment is over.



Technical Parameter

Model No.	GE9612T	GE9632T	GE4852T	GE4832T	GE3842T
Capacity	96×0.2ml	96×0.2ml+77×0.5ml	Double 48×0.2ml	48×0.2ml+30×0.5ml	384 well
Temperature Range	0-100℃				
Heating Rate	5℃/s				
Cooling Rate	4℃/s				
Uniformity	≤ ± 0.2℃				
Accuracy	≤ ± 0.1℃				
Display Resolution	0.1℃				
Temperature Control	BlockTube				
Ramping Rate Adjustable	0.1-5℃				
Gradient Uniformity	≤ ± 0.2℃				
Gradient Accuracy	≤ ± 0.2℃				
Gradient Temp. Range	30-100℃				
Gradient Spread	1-30℃				
Hot Lid Temperature	30-110℃				
Hot Lid Height Adjustable	Stepless Adjustable				
Number of Programs	10000 +(USB FLASH)				
Max. No. of Step	30				
Max. No. of Cycle	100				
Time Increment/Decrement	1 Sec - 600 Sec				
Temp. Increment/Decrement	0.1-10.0℃				
Communication	USB2.0, LAN, wifi				
Power Supply	85-264VAC, 47-63Hz, 600 W				

ELECTROPHORESIS

◆ Universal Power Supply 600C

Feature and Benefits

1. Molding shell, touch keys, dual core microprocessor intelligent control
2. Indicate the preset value and the actual output value at the same time
3. It can store 10 electrophoresis methods
4. With automatic memory function
5. With standard, timing operation function
6. With constant voltage, constant current, constant power, misoperation, fault intelligent prompt functions
7. Automatic detection of no-load, over-load, short circuit, rapid resistance change, ground leak and system overheating

Technical Parameters

Type of Output	Constant-Voltage, Current or Power	Timer Range	1min~99hr, 59min
Increment	1V, 1mA, 1W	Display	LCD display with backlight
Output Range	10~600V, 1~500mA, 1~300W.	Output jacks	Four sets of output jacks



◆ High-voltage power supply ECPT3000

Feature and Benefits

1. Touch keys, dual core microprocessor intelligent control
2. Indicate the preset value and the actual output value at the same time
3. It can store 10 electrophoresis methods
4. With the temperature control operation, range of temperature is RT+10℃~65℃
5. With automatic memory function
6. With Standard, Timing, Temperature control operation function
7. With constant voltage, constant current, constant power, misoperation, fault intelligent prompt functions
8. Automatic detection of no-load, over-load, short circuit, rapid resistance change, ground leak and system overheating

Technical Parameters

Type of Output	Constant-Voltage, Current or Power	Timer Range	1min~99hr, 59min
Increment	1V, 1mA, 1W	Display	LCD display with backlight
Output Range	20~3000V, 1~200mA, 1~200W.	Output jacks	Four sets of output jacks



◆ Basic Power Supply Jy600

Feature and Benefits

1. Molding shell, touch keys, microprocessor intelligent control
2. With automatic memory function
3. With standard, timing operation function
4. Automatic detection of no-load, over-load

Technical Parameters

Type of Output	Constant-Voltage, Current	Timer Range	1min~9hr, 59min
Output range	5~600V, 1~200mA, maximum 120W	Display	LED
Increment	1V, 1mA	Output jacks	Two sets of output jacks



◆ Horizontal Electrophoresis SPCT

Feature and Benefits

1. Abundant buffer not only guarantees cooling effects, but also keeps the pH Value stable during the whole experiment process
2. Unfolded electrodes make repair and parts replacement easy and quick
3. With the sample background color design on the tray, convenient to adding the sample
4. The transparent top lid effectively prevents liquid in the cell from volatilizing and avoids electricity leakage
5. Auto-switch-off when the lid is removed



Technical Parameters

Gel Size (W×L)	60 × 60mm; 120 × 60mm; 60 × 120mm 120 × 120mm.		
Sample volume	3, 6, 8, 11, 13, 18, 25.	Dimension (L×W×H)	300×160×75 (mm)
Buffer Volume	~550ml.	Net weight	1.1 (kg)

◆ Horizontal Electrophoresis SPGT

Feature and Benefits

1. Abundant buffer not only guarantees cooling effects, but also keeps the pH Value stable during the whole experiment process.
2. Unfolded electrodes make repair and parts replacement easy and quick.
3. With a special gel casting, preventing the gel leakage, operation
4. is simple and convenient.
5. The transparent top lid effectively prevents liquid in the cell from volatilizing and avoids electricity leakage.
6. Auto-switch-off when the lid is removed.



Technical Parameters

Gel Size (W×L)	200 × 200mm; 200 × 150mm; 200 × 100mm		
Sample volume	17, 22, 36, 44	Dimension (L×W×H)	397×230×93 (mm)
Buffer Volume	~1800ml	Net weight	3.3 (kg)

◆ Horizontal Electrophoresis Sp7

Feature and Benefits

1. The SP7 is updated from the SP7A with a double-bridge style design;
2. With a cooling device, which can make the electrophoresis process under constant temperature;
3. You can adjusting the position of the adjusting rod according to the medium length, to meet the different electrophoretic distance.
4. Unfolded electrodes make repair and parts replacement easy and quick.
5. Auto-switch-off when the lid is removed.



Technical Parameters

Bridge Size (W×L)	70×250mm×2; 90×250mm×2.	Dimension (L×W×H)	350×260×65 (mm)
Buffer Volume	~1000ml.	Net weight	1.6 (kg)

◆ Vertical Electrophoresis SC22+

Feature and Benefits

1. The installation of the glass plate in just 15 seconds, and does not need the knob, fast and convenient
2. With a gel casting in original position, no need to move glasses from gel making to electrophoresis running. It is more convenient to observe gel preparing through both sides of the glasses
3. High transparent polycarbonate material injection molding, impact resistance, high temperature resistance, corrosion resistance
4. Safety cover open button design, convenient opening the cover
5. With the background color, easy to be observed in the sample adding and electrophoresis process
6. Abundant buffer not only guarantees cooling effects, but also keeps the pH Value stable during the whole experiment process
7. Auto-switch-off when the lid is removed

Technical Parameters

Glass plate size (W×L)	100 × 100 mm	Buffer Volume	~ 750 (ml)
Gel Size (W×L)	82 × 88 mm	Dimension (L×W×H)	150 × 120 × 116 (mm)
Gel thickness	0.75、1.0、1.5 (mm)	Net weight	1.5 (kg)
Gel amount	1~2 (pieces)		
Sample volume	(0.75mm) 11、15 wells; (1.0mm) 11、15wells; (1.5mm) 11、15wells		



◆ Vertical Electrophoresis SC24+

Feature and Benefits

With two gel castings, can cast 1-4 plates of gels at the same time. There are two methods of "casting gel in original position" and "multi-casting gel" for option

1. The installation of the glass plate in just 15 seconds, and does not need the knob, fast and convenient
2. With the gel making device of normal position, don't should to moving the glass plate from the process of making gel to electrophoresis, convenient for observation the gel preparation from the glass on both sides, ensures fast set up times and leak-free operation
3. Safety cover open button design, convenient opening the cover
4. With the background color, easy to be observed in the sample adding and electrophoresis process
5. Abundant buffer not only guarantees cooling effects, but also keeps the pH Value stable during the whole experiment process
6. Auto-switch-off when the lid is removed

Technical Parameters

Glass plate size (W×L)	100 × 100 mm	Sample volume	(1.0mm) 11、15wells; (1.5mm) 11、15wells
Gel Size (W×L)	82 × 88 mm	Buffer Volume	~ 1000 (ml)
Gel thickness	1.0、1.5 (mm)	Dimension (L×W×H)	220 × 170 × 120 (mm)
Gel amount	1~4 (pieces)	Net weight	2.5 (kg)



◆ Vertical Electrophoresis SC28

Feature and Benefits

1. Intended for protein purification and analysis, ideal for the dimensional electrophoresis, DGGE and preparative gel electrophoresis
Equipped with special processing technology aluminums plates, effectively guaranteed the heat dissipation more even, holding stable pH during electrophoresis running
2. Non-proliferation electric field influence, guaranteed the electrophoresis strip more clear and straight. Modular double hinged core cassettes, matched with the basing gel caster, ensuring the whole operation process more convenient
3. Retractable connectors compatible with most major power supplies
For the temperature control, JY-SC28 can be connected with a outer constant temperature circulator.
4. Safe operation design, power can be cut off automatically when remove the lid



Gel Size(W×L)mm: 173×195	Comb wells: 21、35	Buffer requirement: 2200(ml)
Gel thickness: 1、1.5(mm)	Gel capacity: 2	

◆ Vertical Electrophoresis Jx5

Feature and Benefits

1. The installation of the glass plate in just 15 seconds, and does not need the knob, fast and convenient.
2. With the gel making device modular, you can make multi slab gel at the same time.
3. Safety cover open button design, convenient opening the cover.
4. Abundant buffer not only guarantees cooling effects, but also keeps the pH Value stable during the whole experiment process.
5. Auto-switch-off when the lid is removed.



Technical Parameters

Glass plate size(W×L)	216 × 110 mm	Sample volume	(1.0mm) 25、40、52wells
Gel Size(W×L)	186 × 95 mm	Buffer Volume	~ 1800 (ml)
Gel thickness	1.0 (mm)	Dimension(L×W×H)	280 × 140 × 135 (mm)
Gel amount	1 ~ 2 (pieces)	Net weight	3.2 (kg)

◆ Vertical Electrophoresis JX5L

Feature and Benefits

1. The installation of the glass plate in just 15 seconds, and does not need the knob, fast and convenient.
2. With the gel making device modular, you can make multi slab gel at the same time.
3. Safety cover open button design, convenient opening the cover.
4. Abundant buffer not only guarantees cooling effects, but also keeps the pH Value stable during the whole experiment process.
5. Auto-switch-off when the lid is removed.



Technical Parameters

Glass plate size(W×L)	216 × 220 mm	Sample volume	(1.0mm) 25、40、52wells
Gel Size(W×L)	186 × 205 mm	Buffer Volume	~ 3500 (ml)
Gel thickness	1.0 (mm)	Dimension(L×W×H)	280 × 140 × 250 (mm)
Gel amount	1 ~ 2 (pieces)	Net weight	5.6 (kg)

◆ Tank transfer Zy5

Feature and Benefits

1. Electrode spacing is small, greatly save transfer time.
2. With the color marking on the splint, to ensure put the gel right into the inner core.
3. Unfolded electrodes make repair and parts replacement easy and quick.
4. The transparent top lid effectively prevents liquid in the cell from volatilizing and avoids electricity leakage.
5. Auto-switch-off when the lid is removed.
5. Not only can be used as a device independent, and can be used as a module with the buffer tank of SCZ2+.



Technical Parameters

Trans area(W×L)	216 × 110 mm	Dimension(L×W×H)	1.0 (mm)
Buffer Volume	186 × 95 mm	Net weight	1 ~ 2 (pieces)

◆ UV Transilluminators 02

Feature and Benefits

1. The high transparent UV protective screen, can be opened to any angle, safe operation, convenient
2. Using the UV filter glass, quartz ultraviolet lamp, long service life, light uniform.

Technical Parameters

Transmission size(W×L)	200 × 150mm	Volume(L×W×H)	325 × 265 × 150 (mm)
Source ultraviolet wavelength	302 (nm)	Weight	4.6kg
Transmission UV lamp power	8 (W)		



◆ UV Transilluminators 02S

Feature and Benefits

1. No need for darkroom, can be use for all-weather.
2. With the operation of export for cutting the gel.
3. Using the UV filter glass, quartz ultraviolet lamp, long service life, light uniform.

Technical Parameters

Transmission size(W×L)	200 × 150mm	Reflectance UV lamp power	254nm (11W) , 365nm (11W)
Source ultraviolet wavelength	302 (nm)	Volume(L×W×H)	435 × 295 × 490 (mm)
Reflectance UV wavelength	254, 365 (nm)	Weight	18.9kg
Transmission UV lamp power	8 (W)		



◆ Gel documentation 04S-3E

Feature and Benefits

1. CCD with lower lux and high-resolution, easy to get dim stripes and real-time browse, whole-screen display and simple to operate
2. Six time zoom lens and simple to enlarge and shrink gel photos
3. The center position indicator, which can ensure the gel is placed in the center position
4. Intelligent control box
5. You can realize the control of the zoom, focus, aperture, UV light and white light through panel key
6. Safety function for your eyes that automatically shuts down the UV light when the door is opened and reactivates the UV light when the door is shut
7. Timed shut down: The UV light protection system automatically shuts down the lights after 15 minutes to maximize the life of lamp and vitreous
8. The zoom lens is protected with RS232 interface
9. Drawer-style gel platform, convenient to observe, operate, and cutting gel
10. Transferring plate changes UV-light into white-light
11. Using a multi-layer gel-filter effectively filters background noise
12. You can realize the control of the zoom, focus, aperture, UV light and white light through computer mouse
13. Regular and reliable system convenient to maintain and exchange parts

Technical Parameters

Effective pixels	2560 × 1920	UV light transmission area(W×L)	250 × 200 (mm)
Pixel density	10 bit	Visible light transmittance area(W×L)	250 × 210 (mm)
Pixel size	5.4 × 5.4 (um)	Transmission UV wavelength	302 (nm)
Resolution	5.0 megapixels	Reflectance UV wavelength	254, 365(nm)
Signal to noise ratio	≥56db	Transmission UV lamp power	
Camera	low illumination and high resolution digital CCD	Reflectance UV lamp power	254nm (11W) , 365nm (11W)
Zoom lens	F=1:1.2, 2/3 inch 6 times zoom lens	Volume(L×W×H)	470 × 405 × 820 (mm)
Filter	590 (nm)	Weight	29.0kg
Sensitivity	Can detect the double chain DNA of EB staining below 20pg		



GAS CHROMATOGRAPH

◆ GC112N

Gas chromatograph is an instrument for qualitative and quantitative analysis of multi-component complex mixtures by using chromatographic separation technology and detection technology. It is widely used in the fields of medicine and health, petrochemical industry, environmental monitoring, biochemistry and so on.

Technical Features

1. Standard PC control software, built-in chromatographic workstation, achieve PC side reverse control and touch screen synchronous bidirectional control.
2. 7-inch color touch screen, carrier/hydrogen/air channel flow (pressure) digital display.
3. Gas shortage alarm protection function; Heating control protection function (when opening the door of the column box, the motor of the column box fan and the heating system will shut down automatically).
4. Split flow/split ratio can be automatically controlled to save carrier gas.
5. Configure automatic sampler installation and positioning interface to match automatic sampler of various specifications.
6. The multi-core, 32-bit embedded hardware system ensures the reliable operation of the instrument.
7. One-button start function, with 20 groups of sample test mode memory function.
8. Using logarithmic amplifier, detection signal no cut-off value, good peak shape, extensible synchronous external trigger function, can be started by external signals (automatic sampler, thermal analyzer, etc.) at the same time the host and workstation.
9. It has perfect system self-check function and fault automatic identification function.
10. With 8 external event extension function interface, can be selected with various function control valves, and according to their own set time sequence work.
11. RS232 communication port and LAM network port, and the configuration of data acquisition card.



Oven

Content product	22L
Temperature control range	5℃ ~ 400℃ at room temperature
Temperature control accuracy	±0.1℃
Heating rate	0.1 ~ 60℃ / min
Program temperature rise order	9
Program heating repeatability	≤ 2%
Cooling way	open the door after
Cooling speed	≤ 10 mins (250℃ ~ 50℃)

Sampler Injector

Temperature control range	7℃ ~ 420℃ at room temperature
Temperature control method	Independent temperature control
Carrier gas flow control mode	constant pressure
Number of simultaneous installations	3 at most
Type of injection unit	filling column, shunt
Split ratio	split ratio display
Cylinder pressure range	0 ~ 400kPa
Cylinder pressure control accuracy	0.1kPa
Flow setting range	H ₂ : 0 ~ 200ml / min N ₂ : 0 ~ 150ml / min

Control software function

1. Column temperature box control
2. Detector control
3. Injector control
4. Map display

Optional

1. Thermal conductivity detector (TCD) :

- Sensitivity: 5000mV·mL/mg (n-cetane)
- Baseline noise: ≤ 0.05 mV
- Baseline drift: ≤ 0.15mV / 30min
- Dynamic range: 105

2. Packed column

3. Capillary column

Detector

1. FID, TCD (optional)
2. Temperature control: Max. 420℃
3. Number of simultaneous installations: 2 at most
4. Ignition function: automatic
5. Hydrogen flame ionization detector (FID)
 - Detection limit: ≤ 3×10⁻¹² g/s (n-hexadecane)
 - Baseline noise: ≤ 5×10⁻¹⁴A
 - Baseline drift: ≤ 6×10⁻¹³A
 - Dynamic range: 10⁷
 - RSD: 3% or less
6. Supply voltage: AC220V±22V, 50Hz±0.5Hz
7. Power: 3000W

◆ GC126N

Gas chromatograph is an instrument for qualitative and quantitative analysis of multi-component complex mixtures by using chromatographic separation technology and detection technology. It is widely used in the fields of medicine and health, petrochemical industry, environmental monitoring, biochemistry and so on.

Technical Features

1. The host machine adopts a 7-inch color touch screen with friendly man-machine interface.
2. Computer backcontrol and host touch screen to achieve synchronous bidirectional control.
3. The multi-core, 32-bit embedded hardware system ensures the reliable operation of the instrument.
4. Carrier/hydrogen/air flow (pressure) digital display.
5. Gas shortage alarm protection function, Heating control protection function (when opening the door of the column box, the motor of the column box fan and the heating system will shut down automatically).
6. Split flow/split ratio can be automatically controlled to save carrier gas.
7. Configure automatic sampler installation and positioning interface to match automatic sampler of various specifications.
8. Data acquisition is a standard dual-channel data acquisition card with a sampling time of 50ms.
9. Using logarithmic amplification plate, detection signal no cut-off value, synchronous external trigger function, can be started by external signals (automatic sampler, thermal analyzer, etc.) at the same time the host and workstation.
10. It has perfect system self-check function and fault automatic identification function.
11. With eight external event extension function interface, can be selected with a variety of control valves, and according to their own set time sequence work.
12. The external link mode is network port connection (RJ45), which provides convenience for remote control of data.



Column temperature box

Temperature range	5℃ ~ 400℃ at room temperature
Temperature control accuracy	± 0.1℃
Program heating	stage 9/10 platform
Total program time	9999.9 min
Maximum heating rate	60℃ / min

Sampler

- Temperature range: 7℃ ~ 420℃ at room temperature
- Fill column, split/split sampler can be installed
- Working under constant pressure mode
- No more than three independent sampling systems are connected simultaneously

Detector

1. A maximum of 2 units are installed simultaneously. FID, TCD, ECD and FPD are optional.
2. Flow/pressure is displayed directly on the screen.
3. Temperature setting: Max. 420℃
4. Hydrogen flame ionization detector (FID)
 - High voltage switch control
 - Baseline signal display
 - Ignition coil control
 - Detection limit: $\leq 3 \times 10^{-12}$ g/s
 - Sample: N-hexadecane (minimum detection quantity: 3pg/s)
 - Dynamic range: 10⁷
5. Electronic capture detector (ECD)
 - Radiation source: Ni63
 - Detection limit: $\leq 8 \times 10^{-14}$ g/s
 - Sample: R 666 (minimum detection quantity: 80FG/s)
 - Dynamic range: 10³
6. Thermal conductivity detector (TCD)
 - Bridge voltage switch control
 - Bridge current setting: 0 ~ 220 mA
 - Sensitivity: 5000 mV·mL/mg
 - Dynamic range: 10⁵
7. Flame photometric detector (FPD)
 - Temperature setting: Maximum 350℃
 - Detection limit: $\leq 2 \times 10^{-12}$ g/s (P)
 - $\leq 4 \times 10^{-11}$ g/s (S) sample
 - : Methyl parathion
 - Dynamic range: P 10³
 - Dynamic range: S 10²

Heating area

- In addition to the column box independent heating area, there are six heating areas. 2 injector heating zones, 2 detector heating zones and 2 auxiliary heating zones.
- The maximum operating temperature of the auxiliary heating area can reach 400℃.

◆ Atomic absorption spectrometer AA-1800DL

Industry Application

Atomic absorption spectrometers are widely used in scientific research, quality inspection, disease control, environmental protection, metallurgy, agriculture, forestry, and chemical industries. The innovative software and hardware design ensures the accuracy, safety, and ease of use of sample analysis, and the maintenance of the instrument is simple and convenient.

Characteristic

The eight lamp holder atomic absorption spectrometer is developed by using international new technology and experts from domestic universities. It has decades of experience in the development and application of spectroscopy instruments. The product includes flame, graphite furnace and hydride generation system, which can be equipped with a variety of accessories, and the flexible configuration scheme can meet the needs of customers at different levels. The fully automatic multifunctional atomic absorption spectrometer can perform complex sample analysis, and multiple analysis methods can be automatically switched to achieve unmanned automatic analysis.

High precision automatic optical system:

The dispersion rate is 1800 lines / mm, large area grating, new self collimating monochromator, all lenses are coated with quartz, and the wide detection range and optical stability ensure the accuracy of analysis. The full-automatic lamp holder is equipped with 8 independent lamp power supplies, which can be preheated respectively.

Polymer atomization chamber:

High polymer material anti-corrosion atomization chamber, acid and alkali resistance, including hydrofluoric acid, can obtain better sensitivity and stability in both organic and inorganic solutions.

Titanium burner:

Titanium burner can be equipped with 50mm and 100mm burners, air-cooled premixed type, corrosion-resistant and high salt resistant, which can greatly improve the efficiency of flame and the accuracy of flame analysis.

Fully automated analysis:

It can automatically complete safe ignition, extinguishing and switching, with reliable structure and low failure rate, so as to ensure the sensitivity and reproducibility of the flame method.

The eight lamp positions of the light source system are automatically converted, and the high-performance hollow cathode lamp can be directly used to improve the sensitivity of flame analysis, automatically adjust the power supply parameters and beam position, and fully automatically scan the wavelength and find the wave crest.

High tech index:

The element test sensitivity of aa-1800 atomic absorption spectrometer has reached the industry advanced level, and the sensitivity is $\leq 0.015 \mu\text{g/mL}1\%$. The baseline drift is less than 0.003abs/30m, and the stability is better than 0.005abs/4h.

Background correction system:

Deuterium hollow cathode lamp and self absorption buckle background are used for background correction to eliminate the interference of molecular absorption in the determination of low content, reduce the emission noise of deuterium lamp, prolong the service life and have good stability. When the background signal of deuterium lamp is 1a, the background deduction ability is > 50 times.

Intelligent analysis:

Very Intelligent, humanized design, automatic setting and adjustment of flame height, automatic ignition, automatic optimization of horizontal position, and automatic gas flow setting of the system. In case of power failure, misoperation, acetylene leakage, etc., the system will automatically start the safety protection function.

Parameters

Technical index	Wavelength range	185nm - 900nm
	Monochromator type	Czerny-Turner type (Czerny-Turner type)
	Spectral bandwidth	0.1/0.2/0.4/0.7/1.0/1.4/2.0 nm seven-speed automatic switching
	Grating blaze wavelength	230nm
	Grating grooves	1800 lines/mm
	Wavelength accuracy	$\pm 0.15\text{nm}$
	Wavelength repeatability	$< 0.10\text{nm}$
	Resolution	Better than 0.3nm
Flame system	Characteristic concentration (Cu)	$< 0.015\mu\text{g/mL}1\%$
	Detection limit (Cu)	$< 0.002\mu\text{g/mL}$
	Precision (Cu)	$< 0.5\%$
	Static baseline stability	0.002 Abs (static)
	Dynamic baseline stability	0.004 Abs (dynamic)
	Deuterium lamp background correction capability	More than 50times

◆ Atomic absorption spectrometer AA-1800EL

Industry Application

Atomic absorption spectrometers are widely used in scientific research, quality inspection, disease control, environmental protection, metallurgy, agriculture, forestry, and chemical industries. The innovative software and hardware design ensures the accuracy, safety, and ease of use of sample analysis, and the maintenance of the instrument is simple and convenient.

Characteristic

The eight lamp holder atomic absorption spectrometer is developed by using international new technology and experts from domestic universities. It has decades of experience in the development and application of spectroscopy instruments. The product includes flame, graphite furnace and hydride generation system, which can be equipped with a variety of accessories, and the flexible configuration scheme can meet the needs of customers at different levels. The fully automatic multifunctional atomic absorption spectrometer can perform complex sample analysis, and multiple analysis methods can be automatically switched to achieve unmanned automatic analysis.

High precision fully automated optical system:

The dispersion rate is 1800 lines/mm, large area grating, new self-collimating monochromator, all lenses are coated with quartz, and the wide detection range and optical stability ensure the accuracy of analysis. The automatic lamp holder is equipped with 8 independent lamp power supplies, which can be preheated separately.

Titanium burner:

Titanium burner can be equipped with 50mm and 100mm burners, air-cooled premixed, corrosion-resistant and high salt resistant, which can greatly improve the efficiency of flame and the accuracy of flame analysis.

Temperature control of graphite furnace:

Dual temperature control of internal and external air. 20th order linear or nonlinear temperature rise to ensure good sensitivity of the elements to be measured. The furnace is enriched and concentrated for 20 times. The inner wall temperature of graphite tube is monitored by longitudinal light control, and the maximum temperature can be raised to 3000 °C/s.

Background correction system:

Deuterium hollow cathode lamp and self-absorption buckle background are used for background correction to eliminate the interference of molecular absorption in the determination of low content, reduce the emission noise of deuterium lamp, prolong the service life and have good stability. When the background signal of deuterium lamp is 1A, the background deduction ability is > 50 times.

Autosampler:

Integrated design with graphite furnace, using high-precision syringe, with a minimum of 0.5 μL sample, with intelligent online dilution and concentration function.

Characteristic

Technical Index	Wavelength range	185nm ~ 900nm
	Monochromator type	Czerny-Turner type (Czerny-Turner type)
	Spectral bandwidth	0.1/0.2/0.4/0.7/1.0/1.4/2.0nm seven-speed automatic switching
	Grating (mm)	230nm
	Grating groove	1800 lines/mm
	Wavelength accuracy	± 0.15nm
	Wavelength reproducibility	< 0.10nm
	Resolution	Better than 0.3nm
Flame system	Dynamic background correction (DGB)	< 0.015ug/ml/1%
	Deuterium line (DGB)	< 0.002ug/ml
	Precision (DGB)	< 0.5%
	Static baseline noise	0.002 Abs (static)
	Dynamic baseline stability	0.004 Abs (dynamic)
	Deuterium lamp background correction capability	More than 80 times
Graphite	Graphite furnace heating rate	R1 ~ 3000°C
Furnace system	Graphite furnace heating rate	3000°C/s
	Graphite furnace measuring tolerance (DGB precision)	< 2% (Automatic sampling mode)
	Graphite furnace measuring tolerance (DGB precision)	≤ 3% (manual injection mode)
	Graphite furnace measuring tolerance (DGB characteristic quality)	< 0.4 × 10 ⁻¹² g
	Detection limit of cathode ray (DGB graphite furnace)	≤ 0.4 × 10 ⁻¹² g
	Power supply	220V ± 22V, 50Hz ± 1Hz, 5KW (Peak value)



Laboratory Equipment



ELECTRONIC BALANCE

◆ Electronic Analytical Balance



Model	FA1104N	FA2104N
Range	0~110g	0~210g
Accuracy	0.0001g	



Model	FR124CN	FR224CN
Range	0~120g	0~220g
Accuracy	0.0001g	



Model	CP124C	CP224C
Range	0~120g	0~220g
Accuracy	0.0001g	

◆ Electronic Analytical Balance



Model	JA1103N	JA2103N
Range	0~110g	0~210g
Accuracy	0.001g	



Model	FR223CN	FR423CN
Range	0~220g	0~420g
Accuracy	0.001g	



Model	CP223C	CP423C
Range	0~220g	0~420g
Accuracy	0.001g	

◆ Electronic Balance



Model	MP502N
Range	0~500g
Accuracy	0.01g



Model	JY10001
Range	0~1000g
Accuracy	0.1g



Model	SL502N
Range	0~500g
Accuracy	0.01g



Model	JY2001
Range	0~2000g
Accuracy	0.1g



Model	SL1202N
Range	0~1200g
Accuracy	0.01g



Model	JY3001
Range	0~3000g
Accuracy	0.1g



Model	SL2002N
Range	0~2000g
Accuracy	0.01g



Model	JY5001
Range	0~5000g
Accuracy	0.1g

◆ ACS series Balance



Model	Range
ACS-3	3kg/1g
ACS-15	15kg/5g

◆ TCS series Balance



Model	Range
TCS-30	30kg/10g
TCS-60	60kg/10g

DECOLORIZING SHAKER

◆ TS-92

Technical Parameters

Frequency	0-80 rpm
Amplitude	universal adjustment
Tray	320 * 265mm
Overall dimension	370 * 335 * 170mm



MICROSCOPE

◆ Stereo microscope(Binocular)



SM3-0204L

Technical Parameters

Total magnification: 20X-40X
 Eyepiece: WF10X/ ϕ 20mm
 Objective: 2X, 4X
 Viewing Head: Gemel type binocular head, 45° inclined, interpupillary distance 55-75mm
 Diopter:
 Binocular vision adjustment range ± 5
 Field Of View: ϕ 5mm- ϕ 28mm



XT-III-40X

Technical Parameters

Total magnification: 20X-40X
 Eyepiece: WF10X/ ϕ 20mm
 Objective: 2X, 4X
 Viewing Head: Gemel type binocular head, 45° inclined, interpupillary distance 55-75mm
 Diopter: Binocular vision adjustment range ± 5
 Field Of View: ϕ 5mm- ϕ 28mm

◆ Zoom-Stereo microscope (Binocular)



SMZ180-B

Technical Parameters

Total magnification: 6X-50X
 Eyepiece: WF10X/ ϕ 23mm
 Objective: Zoom objective 0.62X-5X (zoom ratio 1:8)
 Viewing Head: Gemel type binocular head, 45° inclined, interpupillary distance 55-75mm
 Diopter: Binocular vision adjustment range ± 6
 Field Of View: ϕ 2.5mm- ϕ 30mm



XTL-165-VB

Technical Parameters

Total magnification: 7X-45X
 Eyepiece: WF10X/ ϕ 20mm
 Objective: Zoom objective 0.7X-4.5X (zoom ratio 1:6.5)
 Viewing Head: Gemel type binocular head, 45° inclined, interpupillary distance 55-75mm
 Diopter: Binocular vision adjustment range ± 6
 Field Of View: ϕ 5mm- ϕ 30mm

◆ Zoom-Stereo microscope(Trinocular)



SMZ180-T

Technical Parameters

Total magnification:
6X-50X
Eyepiece:
WF10X/ ϕ 23mm
Objective:
Zoom objective 0.62X-5X (zoom ratio 1:8)
Viewing Head:
trinocular head, 45° inclined, interpupillary distance 55-75mm
Diopter:
Binocular vision adjustment range ± 6
Field Of View:
 ϕ 2.5mm- ϕ 30mm



XTL-165-VT

Technical Parameters

Total magnification:
7X-45X
Eyepiece:
WF10X/ ϕ 20mm
Objective:
Zoom objective 0.7X-4.5X (zoom ratio 1:6.5)
Viewing Head:
45° inclined, interpupillary distance 55-75mm
Diopter:
Binocular vision adjustment range ± 6
Field Of View:
 ϕ 5mm- ϕ 30mm

◆ Biomicroscope(Binocular)



BMC512

Technical Parameters

Total magnification:
40X-1600X
Eyepiece:
WF10X/ ϕ 20mm
Objective:
Infinite plan achromatic objectives (4X/0.10, 10X/0.25, 40X/0.65, 100X/1.25)
Viewing Head:
Infinite Gemel type binocular tube, 30° inclined, interpupillary distance 48-75mm
Stage:
Double layers with mechanical sliding stage, triangle iron moving up and down
Area: 188*145mm
Moving range: 76mm*54mm
Condenser:
Abbe condenser N.A=1.25 with iris diaphragm, moving up and down, center adjustable, with filter holder



H226-A

Technical Parameters

Total magnification:
40X-1600X
Eyepiece:
WF10X/ ϕ 18mm, WF16X/ ϕ 11mm
Objective:
195 Achromatic (4X/0.10, 10X/0.25, 40X/0.65, 100X/1.25)
Viewing Head:
Compensation binocular head, 30° inclined, interpupillary distance 48-75mm
Stage:
Double layers with mechanical sliding stage
size:
120*115mm, 76*40mm
Condenser:
Abbe condenser N.A=1.25 with iris diaphragm, lifting rings

◆ Biomicroscope(Trinocular)



BMC513

Technical Parameters

Total magnification:
40X-1600X
Eyepiece:
WF10X/ ϕ 20mm
Objective:
Infinite plan achromatic objectives (4X/0.10, 10X/0.25, 40X/0.65, 100X/1.25)
Viewing Head:
30° inclined, interpupillary distance 48-75mm
Stage:
Double layers with mechanical sliding stage, triangle iron moving up and down
Area: 188*145mm
Moving range: 76mm*54mm
Condenser:
Abbe condenser N.A=1.25 with iris diaphragm, moving up and down, center adjustable, with filter holder



H237-A

Technical Parameters

Total magnification:
40X-1600X
Eyepiece:
WF10X/ ϕ 18mm, WF16X/ ϕ 11mm
Objective:
195 Achromatic (4X/0.10, 10X/0.25, 40X/0.65, 100X/1.25)
Viewing Head:
Compensation trinocular head, 30° inclined, interpupillary distance 48-75mm
Stage:
Double layers with mechanical sliding stage
size:
120*115mm
Condenser:
Abbe condenser N.A=1.25 with iris diaphragm

◆ Digital microscope



SMZ180-LTP

Technical Parameters

Total magnification:
6.2X-50X
Eyepiece:
WF10X/φ22mm
Objective:
Zoom objective 0.62X-5 (zoom ratio 1:8)
Viewing Head:
45° inclined, interpupillary distance 55-75mm
Diopter:
Binocular vision adjustment range ±6



BMC500-PBA

Technical Parameters

Total magnification:
40X-1600X
Eyepiece:
WF10X/φ20mm
Objective:
Infinite plan achromatic objectives (4X/0.10, 10X/0.25, 40X/0.65, 100X/1.25)
Viewing Head:
30° inclined, interpupillary distance 48-75mm
Stage:
Double layers with mechanical sliding stage, triangle iron moving up and down
Area: 188*145mm
Moving range: 76mm*54mm
Condenser:
Abbe condenser N.A=1.25 with iris diaphragm, moving up and down, center adjustable, with filter holder.

ORBITAL SHAKER

◆ OS-100 / OS-200

Characteristics

1. Suitable for a variety of mixing tasks in different fields
2. Speed: 50-300rpm
3. Track diameter 10mm (horizontal rotation)
4. With timing function, cultivation time can be set arbitrarily within the range of 1min-100 hours.
5. Interchangeable stage, maximum load: 3kg
6. Low voltage power supply, suitable for freezer use
7. Brushless DC motor drive, long life
8. Working environment temperature: 4-45℃
9. Optional: Adjustable flask rack, universal tray, conical flask rack



Technical Parameters

model	OS-100	OS-200
speed	50 – 300rpm	50 – 250rpm
Track diameter	10mm	20mm
time range	1min – 99h59min	1min – 99h59min
Max capacity	3.0kg	2.5kg
size	280 x 270 x 110	280 x 270 x 110
Working temp	4 – 45℃	4 – 45℃

ADJUSTABLE SPEED MULTIPURPOSE OSCILLATOR

◆ HY-2

Technical Parameters

With mechanical timing	
Oscillation frequency	0 ~ 300 times / min
Oscillation amplitude	20 mm
Bottling volume test tube	16 x 200, 100ml x 15, 200ml x 9
Working load	20kg
Timing range	0 ~ 120min



WATER BATH

◆ HSS-Series

Characteristics

1. The shell is made of cold-rolled sheet, and the surface is electrostatic sprayed.
2. Temperature setting, automatic constant temperature, digital display.
3. Accurate temperature control, stable performance, simple operation, corrosion resistance, strong and durable.

Technical Parameters

HHS-11-2	RT+5~99.9℃, accuracy: 1℃,Stainless
HHS-11-4	RT+5~99.9℃, accuracy: 1℃,Stainless
HHS-11-6	RT+5~99.9℃, accuracy: 1℃,Stainless



MANUAL SINGLE CHANNEL ADJUSTABLE PIPETTE

Characteristics

1. It is easy to calibrate and repair with accessory tools
2. Convenient nozzle ejector
3. Replacement nozzle can prevent contamination and nozzle damage
4. Detachable nozzle, with high performance chemical corrosion resistance and high temperature and high pressure disinfection

Technical Parameters

Range	Increment	Range	Increment
0.1-2.5μl	0.05μl	20-200μl	1μl
0.5-10μl	0.1μl	50-200μl	1μl
5-50μl	0.5μl	100-1000μl	5μl
2-20μl	0.5μl	200-1000μl	5μl
10-100μl	1μl	1000-5000μl	50μl



MULTI CHANNEL ADJUSTABLE PIPETTE

Characteristics

- 1 The nozzle ejector can push 8 / 12 suction nozzles at the same time, which is efficient and labor-saving
- 2 The liquid head can rotate 360 degrees to facilitate liquid transfer
- 3 Each nozzle has its own piston device, which makes maintenance very easy
- 4 Special nozzle connection design, easy to observe the sealing condition of suction nozzle



LAMINAR FLOW CABINET

◆ ZJ-CJ Series

Characteristics

1. With quasi closed glass door which can effectively prevent the external air flow and the stimulation of peculiar smell on human body
2. With adjustable air volume unit system
3. With LED LCD control panel
4. Experimental area is made of stainless steel

Photo					
Model	ZJ-CJ-1D	ZJ-CJ-1G	ZJ-CJ-1F	ZJ-CJ-1FD	ZJ-CJ-2FD
External size	850×570×1550 (L×W×H) mm	850×570×1550 (L×W×H) mm	1050×680×1600 (L×W×H) mm	1050×680×1600 (L×W×H) mm	1540×680×1600 (L×W×H) mm
Purification area	700×500×500 (L×W×H) mm	700×450×500 (L×W×H) mm	870×650×520 (L×W×H) mm	870×650×520 (L×W×H) mm	1360×650×520 (L×W×H) mm
Purification efficiency	100 Grade (US federal standard 209b)				
Weight	85kg		150kg		200kg
Average wind speed	0.3-0.6m/s (Adjustable)				
Power	0.3KW		0.4KW		0.8KW
Average No. colonies:	≤0.5Pcs / dish-H				
Noise	≤60dB (A)				
Half peak of vibration;	≤3μm (X+Y+Z)				
Power	220v50Hz				
Filter size	695×455×50×1 (L × W × H × Pcs) mm	695×455×50×1 (L × W × H × Pcs) mm	865×555×50×1 (L × W × H × Pcs) mm	865×555×50×1 (L × W × H × Pcs) mm	1355×553×50×1 (L × W × H × Pcs) mm
Lighting germicidal lamp	15W*④/15W*④		20W*④/20W*④		30W*④/30W*④

◆ Chemical Fume Hood ZJ-TFG series

Characteristic

- 1 Use 50% fireproof high-density board as the frame, and the experimental area uses stainless steel (PP) veneer, which has good sealing, beautiful appearance, strong and durable
- 2 The negative pressure form effectively discharges the experimental gas in the working area
- 3 Digital display LCD control panel, with fast, medium and slow three speed adjustable, more user-friendly design
- 4 The working area is made of SUS304 brushed stainless steel (or PP material), which is easy to clean and anti-corrosion
- 5 Standard configuration of 160mm diameter, 1 meter long exhaust pipe and elbow
- 6 One five-hole socket in the work area
- 7 Configurable working area sink and faucet



Technical Parameters

No. Index/Model	ZJ-TFG-12	ZJ-TFG-15	ZJ-TFG-18
Discharging speed	Within 0.25m-0.45m/s adjustable		
Inlet pressure	>0.5Pa _x		
Power	400W	800W	800W
Power supply	AC, 220 V/50Hz		
Weight	160KG	180KG	200KG
Dimension of working area(W1*D1*H1)	1030*700*600mm	1330*700*600mm	1630*700*600mm
Overall dimension W*D*H	1200*760*1950mm	1500*760*1950mm	1800*760*1950mm
Specification and number of fluorescent lamp or UV lamp	20W*1	30W*1	20W*2

STAINLESS STEEL DISTILLER

◆ DZ series

Model	Outflow	Power	Packing(cm)
DZ5Z	≥5L/h	220v/50hz 4.5kW	35×28×75
DZ10Z	≥10L/h	380v/50hz 7.5kW	42×38×90
DZ20Z	≥20L/h	380v/50hz 15kW	51×36×80



PORTABLE STERILIZER

◆ YX series

Model	Volume	Size	Packing
YX280B	18 (L)	φ28×21	42×42×56
YX280B*	24 (L)	φ28×31	42×42×66



Characteristics

All stainless steel
Both electric heating and external combustion heating can be used
The heating tube with anti dry burning function is adopted
The pressure gauge shows both pressure and temperature

Technical Parameters

Power: 220V 50HZ . 2KW
Working temperature: 126℃
Working pressure: 0.142MPa

MAGNETIC HEATING STIRRER

◆ 79-1

Technical Parameters

Speed regulation
range
0-1400rpm

Working face
diameter
125mm

Heating
power
300W



TEMPERATURE MAGNETIC STIRRER

◆ HJ-3

Characteristics

HJ-3 digital display Temperature Magnetic Stirrer, with stainless steel tray heating, electronic temperature regulation, temperature digital display, excellent performance, no noise, no vibration, good mixing effect, is a high-quality laboratory test tool.

Technical Parameters

Temp control: +5~100℃
Temp accuracy: ±1℃
Heat Power: 150W
Stir power: 5-6W

Stir speed: 0~1400R/min
Working diameter: 130mm
Stir capacity: 100~1000ml



TABLE HIGH SPEED CENTRIFUGE

◆ TGL-16K

Applications

H1-16K desktop high-speed centrifuges are widely used in clinical medicine, biochemistry, genetic engineering, immunology and etc. It is essential equipment for hospitals, research institutes and universities.

Key Features

1. Small size with LCD display, great space saver for the lab.
2. Steel structure, centrifuge chamber made of stainless steel.
3. AC frequency variable motor drives, stably and quietly during operation.
4. Parameters can be revised during operation without stopping.
5. 10 level speed control with 40 groups of program.
6. Emergency lid safety lock.

Technical Parameters

Max RPM (rpm)	16500rpm	Voltage	AC 220±22V 50/60Hz 10A
Max RCF	18757×g	Power	420W
Max Capacity	12×5ml	Noise Level	≤ 60dB (A)
Timer	1min – 99min	Chamber Diameter	Φ200mm
Revolutions/min	±10r/min		

Rotor Type	No.	Capacity	RPM (r/min)	RCF(×g)
Angel Rotor	1	16×1.5/2.2ml	16500rpm	18360×g
	2	12×5ml	15000rpm	15940×g
	3	24×1.5/2.2ml	14000rpm	18757×g

◆ TGL-18K

Applications

H3-18K desktop high-speed centrifuges are widely used in clinical medicine, biochemistry, genetic engineering, immunology and etc. It is essential equipment for hospitals, research institutes and universities.

Key Features

1. Medium size and good compatibility with LED display.
2. Microcomputer control and driven by AC frequency conversion motor.
3. Automatically calculate RCF, RPM and RCF switching freely.
4. Up to 10 level accelerate and decelerate control.
5. Over speed, over heat, unbalance protections with auto lid lock.

Technical Parameters

Max RPM	18500rpm	Voltage	AC 220±22V 50Hz 10A
Max RCF	23900×g	Power	500W
Max Capacity	4×100ml	Noise Level	≤ 60dB (A)
Timer	1min – 99min	Chamber Diameter	Φ320mm
Revolutions/min	±10r/min		

Rotor Type	No.	Capacity	RPM (r/min)	RCF(×g)
Angel Rotor	1	12×1.5/2.2ml	18500rpm	23900×g
	2	18×0.5ml	16000rpm	16000×g
	3	10×5ml	15000rpm	15940×g
	4	24×1.5/2.2ml	14000rpm	18757×g
	5	36×1.5/2.2ml	14000rpm	20025×g
	6	12×10ml	13000rpm	17370×g
	7	6×50ml/ Round type	12000rpm	15285×g
	8	6×50ml/ Sharp type	11000rpm	12840×g
	9	12×15ml/ Sharp type	10000rpm	9690×g
	10	4×100ml	10000rpm	9690×g

TABLE HIGH SPEED REFRIGERATED CENTRIFUGE

◆ TGL-16KR

Applications

TGL-16KR high speed refrigerated centrifuge is widely used in clinical medicine, biochemistry, genetic engineering, immunology, etc. It is an indispensable instrument for centrifugation at all levels of hospitals, research institutes, and universities.

Key Features

- 1 Small size with LCD display, great space saver for the lab.
- 2 Steel structure, centrifuge chamber made of stainless steel.
- 3 AC frequency variable motor drives, stably and quietly during operation.
- 4 Parameters can be revised during operation without stopping.
- 5 Automatic calculates and displays RCF at the same time.
- 6 10 level speed control with 40 groups of program.
- 7 Emergency lid safety lock.
- 8 Energy-efficient ECO friendly refrigeration system.



Technical Parameters

Model	TGL-16KR	Temp Range	-20℃ ~ 40℃
Max RPM (rpm)	16500rpm	Temp Accuracy	±1.0℃
Max RCF	18757 × g	Voltage	AC 220±22V 50Hz 10A
Max Capacity	12 × 5ml	Power	550W
Timer	1min - 99min	Noise Level	≤ 60dB(A)
Revolutions/min	± 10r/min	Chamber Diameter	Φ160mm

Rotor Type	No.	Capacity	RPM (r/min)
Angel Rotor	1	16×1.5/2.2ml	16500rpm/18360×g
	2	12×5ml	15000rpm/15940×g
	3	24×1.5/2.2ml	14000rpm/18757×g
	4	4×8x0.2ml PCR	13500rpm/11610×g

◆ TGL-20KR

Key Features

1. High and low speed universal centrifuge, high compatibility with multiple rotors.
2. Microcomputer control with LED display, driven by AC frequency conversion motor.
3. Automatic identification rotors and speed limit control.
4. Automatically calculate RCF, RPM and RCF switching freely.
5. Up to 10 level accelerate and decelerate control.
6. Displayed in seconds when the countdown time is less than one minute.
7. Electronic locks with full steel inner cavity protective cover.
8. Imported energy-efficient ECO friendly refrigeration system.
9. One key pre-cooling function.
10. Suitable for the separation and purification of radio immunity, biochemistry, biopharmaceuticals, and blood products.



Technical Parameters

Model	H4-20KR		
Max RPM	21000rpm	Voltage	AC 220 ± 22V 50Hz 15A
Max RCF	30642 × g	Power	1300W
Max Capacity	4 × 750ml	Noise	≤ 60dB (A)
Timer	1min - 99min	Chamber Diameter	φ 420mm
Revolutions/min	-20℃ ~ 40℃		
Temp Range	± 1.0℃		
Temp Accuracy	± 10r/min		

Rotor Type	No.	Capacity	MAX RPM/MAX RCF	MAX RPM/MAX RCF	MAX RPM/MAX RCF
Angle Rotor	1	4×1.5/2.0ml	/	/	30000rpm/62400×g
	2	12×1.5/2.2ml	21000rpm/ 30642×g	25000rpm/41900×g	/
	3	12×5ml	18000rpm/20800×g	20000rpm/27218×g	20000rpm/27218×g
	4	24×1.5/2.2ml	16500rpm/28050×g	/	/
	5	12×10ml	15000rpm/23120×g	/	/
	6	48×1.5/2.2ml	14000rpm/20595×g	/	/
	7	4×100ml	14000rpm/ 24385×g	/	/
	8	6×50ml/Round bottom	14000rpm/ 19885×g	/	/
	9	4×8×0.2ml PCR tube	13500rpm/11610×g	/	/
	10	6×50ml/Sharp bottom	13000rpm/ 18065×g	/	/
	11	12×15ml/Sharp bottom	12000rpm/ 15710×g	/	/
	12	8×50ml/Round bottom	12000rpm/ 16000×g	/	/
	13	8×50ml/Sharp bottom	11000rpm/ 14610×g	/	/
Swing-out rotor	14	4×750ml	4200rpm/ 3950×g	/	/
		4×500ml	4200rpm/ 3950×g	/	/
	15	4×250ml	4200rpm/ 3850×g	/	/
		6×250ml	4200rpm/ 3850×g	/	/
	16	4×50/100ml	5500rpm/ 5310×g	/	/
	17	8×50/100ml	4200rpm/ 3100×g	/	/
		16/24×10/15ml	4200rpm/ 3100×g	/	/
		32×10/15ml	4200rpm/ 3100×g	/	/
Elisa plate rotor	18	4×2×96 Hole	4200rpm/ 3910×g	/	/

TABLE LOW SPEED CENTRIFUGE

◆ TGL-5K

Applications

TGL-5K is widely used in hospitals, universities and laboratories because of its high performance with stable and reliable quality.

Key Features

- 1 Medium size with high compatibility.
- 2 Microcomputer control with LED display, driven by AC frequency conversion motor.
- 3 Special design with Shock absorber ,auto-balance function.
- 4 Electronic locks with full steel inner cavity protective cover.
- 5 RCF and speed separately and switching free, automatically calculate RCF.
- 6 Automatic calculates and displays RCF at the same time.
- 7 Multiple stainless steel rotor holder for option.
- 8 One key short-time centrifuge.



Technical Parameter

Max RPM	5500rpm
Max RCF	4900×g
Max Capacity	4×250ml
Timer	1min ~ 99min
Revolutions/min	±10r/min

Voltage	AC 220±22V 50Hz 10A
Power	500W
Noise Level	≤ 60dB (A)
Chamber Diameter	Φ380mm

Rotor	No	Capacity	RPM/RCF
Angle Rotor	1	4/6 × 50ml	5500rpm/4900 × g
Swing-out Rotor	2	4 × 50/100ml	5000rpm/4390 × g
	3	8 × 50/100ml	4000rpm/2810 × g
	4	16 × 10/15ml	4000rpm/2810 × g
	5	24 × 10/15ml	4000rpm/2810 × g
	6	32 × 10/15ml	4000rpm/2810 × g
	7	48x5/7ml	4000rpm/2810 × g
	8	64x5ml	4000rpm/2810 × g
	9	4 × 250ml	4000rpm/3500 × g
	10	2 × 2 × 96 Hole	4000rpm/2300 × g
Micro plates rotor	11	2 × 2 × 48 Hole	4000rpm/1700 × g

TABLE LOW SPEED REFRIGERATED CENTRIFUGE

◆ TGL-5KR

Applications

TGL-5KR bench top low-speed refrigerated centrifuge can be equipped with variety of rotors and adapters, suitable for separation and purification of radio immunity, clinical medicine, biochemistry, biopharmaceuticals, and blood products. It is an indispensable instrument for centrifugation at hospitals, research institutes and universities.

Key Features

- 1 Microcomputer control with LED display, driven by AC frequency conversion motor.
- 2 RCF and speed separately and switching free, automatically calculate RCF
- 3 Up to 10 level accelerate and decelerate control.
- 4 Displayed in seconds when the countdown time is less than one minute.
- 5 Electronic locks with full steel inner cavity protective cover.
- 6 Imported energy-efficient ECO friendly refrigeration system.
- 7 One key pre-cooling function.



Technical Parameter

Max RPM (rpm)	5500rpm
Max RCF	5310 × g
Max Capacity	4 × 750ml
Timer	1min – 99min
Revolutions/min	± 10r/min
Temp Range	-20℃ – 40℃

Temp Accuracy	± 1.0℃
Voltage	AC 220 ± 22V 50Hz 15A
Power	1500W
Noise Level	≤ 60dB (A)
Chamber Diameter	Φ420mm

Rotor	No	Capacity	RPM/RCF
Swing-out Rotor	1	4 × 50ml	5500rpm/5310 × g
	2	4 × 100ml	5000rpm/4390 × g
	3	8 × 50ml	4000rpm/2810 × g
	4	16 × 10/15ml	4000rpm/2810 × g
	5	24 × 10/15ml	4000rpm/2810 × g
	6	32 × 10/15ml	4000rpm/2810 × g
	7	48 × 5/7ml	4000rpm/2810 × g
	8	64 × 5/7ml	4000rpm/2810 × g
	9	72 × 5/7ml	4000rpm/2810 × g
	10	96 × 5/7ml	4000rpm/3580 × g
	11	120 × 5/7ml	4000rpm/3580 × g
	12	4 × 750ml	4000rpm/3580 × g
		48 × 15ml	4000rpm/3580 × g
	13	4 × 500ml	4000rpm/3580 × g
	14	4 × 250ml	4000rpm/3500 × g
	15	4 × 250ml/Sharp bottom	4000rpm/3500 × g
	16	6 × 250ml	4000rpm/3500 × g
Micro plates rotor	17	4 × 2 × 96 Hole	4000rpm/3550 × g
	18	2 × 2 × 96 Hole	4000rpm/2300 × g
	19	2 × 2 × 48 Hole	4000rpm/1700 × g

FLOOR LOW SPEED LARGE CAPACITY REFRIGERATED CENTRIFUGE

◆ TGL-6KR

Applications

The TGL-6KR has large capacity, stable and durable, with continuously optimized electrical control. It equipped with the latest ultra-light and high-capacity rotor, specially designed for customers with large capacity requirements, such as blood stations, pharmaceuticals, bioengineering and etc.

Key Features

- 1 Brushless AC frequency conversion motor, maintenance free.
- 2 Speed stepped in 100rpm with accuracy $\pm 20\text{rpm}$ and customizable.
- 3 Eco-Friendly refrigerating system, temperature between $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$.
- 4 Over speed, over temperature, imbalance protections with auto lid lock.
- 5 Self-correction balancing swivel (Optional), up to $3 \times 50\text{g}$ weight imbalanced.
- 6 Full stainless steel body, more stable and quite during operation, noise level $\leq 60\text{dB(A)}$.
- 7 High capacity up to $6 \times 1000\text{ml}$ swing out rotor, especially for blood bank.



Technical Parameter

Max RPM	6500rpm	Temp Accuracy	$\pm 1.0^{\circ}\text{C}$
Max RCF	$6680 \times g$	Voltage	AC $220 \pm 22\text{V}$ 50Hz 30A
Max Capacity	$6 \times 1000\text{ml}$	Power	4500W
Timer	1min – 23h59min	Noise	$\leq 60\text{dB (A)}$
Revolutions/min	$\pm 10\text{r/min}$	Chamber Diameter	$\Phi 600\text{mm}$
Temp Range	$-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$		

Rotor	No	Capacity	Max Speed (r/min)	Max RCF($\times g$)
Angle Rotor	1	$6 \times 250\text{ml}$	6500rpm	$6610 \times g$
	2	$6 \times 300\text{ml}$	6500rpm	$6610 \times g$
	3	$6 \times 500\text{ml}$	6000rpm	$6680 \times g$
Swing-out Rotor	4	$6 \times 1000\text{ml}$ Round Type	4200rpm	$5100 \times g$
		$6 \times 1000\text{ml}$ Square Type	4200rpm	$5100 \times g$

WATER CIRCULATION VACUUM PUMP

◆ SHZ-95B

Features

- 1 5 exhaustors can be used individually or in parallel, with a vacuum gauge.
- 2 Pump body is made of stainless steel; motor made by Sino-foreign joint venture; pump spindle made of stainless steel; pump head design complying with fluid mechanics; shell is made of engineering plastics or stainless steel.
- 3 The exhaust speed is as fast as 14L/MIN.
- 4 Anti-corrosive, without pollution, low noise, easy to move.
- 5 Optional: vacuum regulating valve.
- 6 This vacuum pump can absorb the harmful gas, which is environmental friendly and ensures the physical and psychological health of experimenters.
- 7 Water and energy saving instrument.



Parameters

Power (W)	370	Max. Vacuum Degree (MPa)	0.098
Voltage (V/Hzv)	220/50	Unit Extraction (L/min)	10
Flow Rate (L/min)	≥80	exhaustor	5
Lift (m)	≥12	Water tank volume (L)	≥50
Safety Protection	Check valve	Water tank material	PVC
Shell material	Cold rolled sheet with anti-static spray	Product size (mm)	450L×350W×820H

◆ SHZ-III

This pump is updated based on the water circulation vacuum pump, with features of small space, light weight and beautiful appearance, which is also diversified with different shells like transparent, anti-corrosive and stainless steel.

Features

- 1 2 exhaustors with 2 vacuum gauge, which can be used individually or in parallel.
- 2 Pump head is made of stainless steel or anti-corrosive material.
- 3 Anti-corrosive, without pollution, low noise, easy to move.
- 4 Optional: vacuum regulating valve.



Model	Model					Model				Product size LWH(mm)	Net Weight Kg
	Power	Voltage	Flow Rate	Lift	Shell material	Max. Vacuum	Unit Extraction	exhaustor	Water tank volume		
	W	V/HZ	L/min	M		Mpa	L/min	pcs	L		
SHZ-III	180	220V/50	60	8	Anti-corrosion plastic	0.098	10	2	15	400*280*420	10.5

ROTARY EVAPORATOR

◆ TRT-10

Features

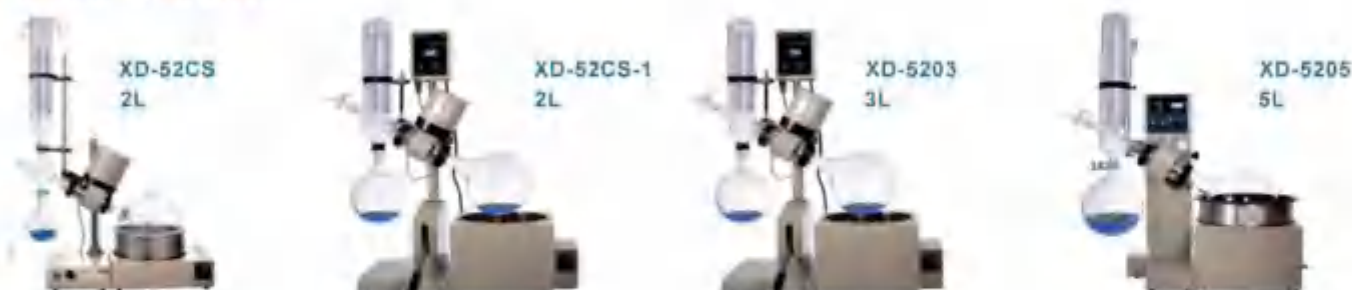
- 1 Big color touch screen with menu interface displaying several data
- 2 Data storage for the commonly used experiments, which makes flash distillation started with a button-press.
- 3 Heating bath with Teflon coating, which is easy to clean, anti-corrosive and high temperature resistant as well.
- 4 Unattended mode with safe operation function, which is in automatic standby mode after the experiment.
- 5 Special design of bottle pulling switch, which is easy to disassemble the evaporation flask.
- 6 Built-in vacuum control system which is easy and quick to operate.
- 7 Automatic lifting with safety stop and timing function.
- 8 Equipped with RS485/USB and infrared ray interface.
- 9 Vertical condenser with drip point design, which prevents backflow.
- 10 Integral glass spindle, which makes steady startup and positive and negative rotating available.
- 11 Anti-dry protection with over temperature alarm and automatic standby function.
- 12 Safety handle design on heating bath prevents scald.
- 13 Sealing is made up of imported PTFE with special technique. Compact structure design, which saves a lot space.



Technical Parameter

Bath Volume	3L	Vacuum control	Built-in
Lift	150mm	Motor Power	60W
Temp. range	RT--210℃	Condenser	Vertical
Temp. Control	Touch screen; PID Control	Cond. Area	1800cm ²
Temp. Precision	± 1℃	Positive&Negative Rotating	Yes
Size(LWH)	600*330*720mm	Safety Degree	IP 20
Voltage	AC220V/AC110V	Interface	RS485/USB/infrared ray interface
Frequency	50 / 60Hz	Over Temp. Alarm	Yes
Total Power	1400W	Rotating Speed	Max, 310rpm/min
Weight	16kg	Humidity Requested	≤80%
Heating Power	1300W	Temp. Requested	5℃--40℃
Lowest Speed	20rpm/min	Positive&Negative Rotating timer	Yes
Host	DC Motor		

◆ TXD-52 Series



Features

1. Main metal parts are made of stainless steel and rust-proof aluminium alloy.
2. Elegant appearance with compact structure design.
3. Practical and durable to use.
4. Sealing system made of fluororubber and imported PTFE material; combined with glass spindle, which is durable and without slag droppings.
5. Water bath with temperature range from room temperature to 99 °C.
6. Protection function: heater stop heating in over temperature condition.

Technical Parameter

Model	XD-52CS	XD-52CS-1	XD-5203	XD-5205
Lift	Manual sliding lifting with length of 150mm	Rotary lifting with lifting length of 150mm	Strut-press lifting with length of 150mm	Button-press lifting with length 150mm
Rotating Speed	0-150rpm/min	0-130rpm/min;		
Rotation control	Rotary stepless control	stepless control; digital display		
Evap. Capacity	/	Max.0.18L/min (H2O)	Max.0.21L/min (H2O)	Max.0.38L/min (H2O)
Temp. range/precision	Auto control; digital display: Water Bath: RT,-99℃±1℃			
Bath Material	Integral Teflon bath	stainless steel heating bath with outer heater		Integral Teflon bath
Bath Size	Φ22*11.5cm	Φ24.5*15cm	Φ26*15cm	Φ29*17cm
Vacuum	NO	NO	NO	Vacuum gauge and valves to control
Heater Power	1KW			2KW
Flask Volume	0.25-2L		0.25-3L	0.25-5L
Environment Temp.	5-40℃			
Condenser	Cold trap	Vertical Dual-reflux coil condenser		
Condense area	/	0.15m ²	0.31m ²	
Feeder	Valve type feeding pipe equipped with tetrafluoroethylene pipe and water retaining ring			
Sealing	Imported PTFE and special complex compounded with special technique, which ensures good sealing and improves the anti-corrosion and durability property.			
Factory Configuration	24# eggplant Rotating Flask 500ml*1 Ball mill mouth Receiving Flask:250L*1	24# standard mouth Rotating Flask 3L*1 Receiving Flask:2L*1	24# standard mouth Rotating Flask 3L*1 Receiving Flask:2L*1 AC220V/50HZ	29# eggplant flask 1L*1 F50 Flange mouth round bottom flask 5L*1 S35 ball mill mouth flask 3L*1
Input	AC220V/50HZ			

◆ TXD-52 Series



TXD-52A
2L



TXD-52AA
2L



TXD-5299
2L

Features

1. Ball mill mouth coil condenser, which is fast to condense and easy to assemble and disassemble.
2. Manual lifting combine with automatic lifting, which is easy to operate.
3. Stepless rotating speed control with digital displaying of temperature.
4. Sealing system made of fluororubber and imported PTFE material; combined with glass spindle, which is durable and without slag droppings.
5. Integral Teflon heating bath, which is anti-corrosive, fast-heating and easy to clean.
6. Main metal parts are made of stainless steel and rust-proof aluminium alloy.
7. Elegant appearance with compact structure design.
8. Practical and durable to use.
9. Integrated control panel, which makes steady rotation and precise temperature control.
10. Water bath with temperature range from room temperature to 99 °C.
11. Valve type feeding pipe equipped with tetrafluoroethylene pipe and water retaining ring.
12. Equipped with protection cap, which is heat preserved, energy saving and anti-spill and anti-boiling.

Technical Parameter

Model	TXD-52A	TXD-52AA	TXD-5299
Lift	Manual lifting combine with automatic lifting, which is easy to operate.		
Rotating Speed	0-150rpm/min		
Rotation control	Rotary stepless control; stepless control; digital display		
Evap. Capacity	/		
Temp. range/precision	Auto control; digital display; Water Bath: RT.-99°C ± 1°C		
Bath Material	Integral Teflon bath anti-corrosive, fast heating and easy to clean		
Bath Size	Φ 22*11.5cm		
Vacuum	NO		
Heater Power	1KW		
Flask Volume	0.25-2L		
Environment Temp.	5-40°C		
Condenser	Vertical ball mill mouth coil condenser, which is easy to disassemble with fast condense speed		
Condense area	/		
Feeder	Valve type feeding pipe equipped with tetrafluoroethylene pipe and water retaining ring		
Sealing	Imported PTFE and special complex compounded with special technique, which ensures good sealing and improves the anti-corrosion and durability property.		
Factory Configuration	24# eggplant Rotating Flask 250ml*1, S35 Ball mill mouth Receiving Flask 500ml*1		
Input	AC220V/50HZ		

◆ TXDSY-Series

Features

1. Ball mill mouth coil condenser, which is fast to condense and easy to assemble and disassemble.
2. Manual lifting combine with automatic lifting, which is easy to operate
3. Stepless rotating speed control with digital displaying of temperature
4. Sealing system made of fluororubber and imported PTFE material, combined with glass spindle, which is durable and without slag droppings.
5. Integral Teflon heating bath, which is anti-corrosive, fast-heating and easy to clean.
6. Main metal parts are made of stainless steel and rust-proof aluminium alloy
7. Elegant appearance with compact structure design.
8. Practical and durable to use.
9. Integrated control panel, which makes steady rotation and precise temperature control.
10. Water bath with temperature range from room temperature to 99 °C.
11. Valve type feeding pipe equipped with tetrafluoroethylene pipe and water retaining ring.
12. Equipped with protection cap, which is heat preserved, energy saving and anti-spill and anti-boiling.



Technical Parameter

Model	TXDSY-2000A	TXDSY-3000A	TXDSY-5000A
Rotating Speed	LCD Screen; 0-310rpm/min		Color LCD Screen; 0-200rpm/min
Evap. Capacity	Max.25ml/min (H ₂ O)	Max.27ml/min (H ₂ O)	Max.43ml/min (H ₂ O)
Temp. range/precision	Microcomputer PID controller; Water Bath: RT.-99℃ ± 0.5℃		
Bath Material	Integral Teflon compound heating bath with safe handle, which prevents from scald; the medium sized bath volume makes distillation fast.		
Bath Size	φ 23 × 13cm	φ 26 × 15cm	φ 29 × 17cm
Positive&Negative Rotating	Intermittent positive and negative rotating function with timing function (0-60s) for drying process of powder samples.		
Lift	Automatic balance lifting which can be controlled by either button-press or Color LCD screen; the lifting length is 150mm, with fixed safety distance of 60mm, which prevents crashing.		
Temp. Set	Rotating-switch coding for temperature setting with big LCD screen display.		
Safety	Anti-dry prevention function which makes flask automatic lifting; instrument will stop at the set timing (0-999min); automatic lifting and standby alarm protection in abnormal or over temperature state.		
Heater Power	1.5KW	1.5KW	1.5KW
Flask Volume	0.25-2L	0.25-3L	0.25-5L
Sealing	Imported PTFE and special complex compounded with special technique, which ensures good sealing and improves the anti-corrosion and durability property.		
Condenser	Vertical 3-layered coil condenser with big condensation area, equipped with drip point and backflow prevention, which effectively increases the evaporation efficiency.		
Condense Area	0.18m ²	0.21m ²	0.31m ²
Environment Temp.	5℃-40℃		
Factory Configuration	29#Eggplant Shaped Flask1L*1 29# Flange mouth Round Bottom Flask 2L*1 S35Ball mill mouth Receiving Flask 1L*1	29#Eggplant Shaped Flask1L*1 F50Flange mouth Round Bottom Flask3L*1 S35Ball mill mouth Receiving Flask 2L*1	29#Eggplant Shaped Flask1L*1 F50Flange mouth Round Bottom Flask5L*1 S35Ball mill mouth Receiving Flask:3L*1
Input	AC220V/50HZ		
Optional: Vacuum controller for precise vacuum control. Warning: The protection cap is only for water bath experiment. Please do not use in oil bath experiment.			

◆ TPDE Series

Features

1. Big LCD screen with menu interface displaying several data; rotary switch easy to operate
2. Heating bath with Teflon coating, which is easy to clean, anti-corrosive and high temperature resistant as well
3. Unattended mode with safe operation function, which is in automatic standby mode after the experiment
4. Special design of bottle pulling switch, which is easy to disassemble the evaporation flask
5. Sealing made up of imported PTFE with special technique
6. Both screen touch control and button press automatic lifting available, easy and safe to use
7. DC rotating motor of 70w power starts steadily
8. Vertical condenser with drip point design prevents backflow.
9. Intermittent positive and negative rotating function with timer function for drying process.
10. Optional vacuum controller for precise control of vacuum degree.
11. Oil and water heating bath with safe handle, which is heat insulated and prevents scald.
12. Equipped with protection cap, which is heat preserved, energy saving and anti-spill and anti-boiling



Technical Parameter

Model	TPDE-2000A	TPDE-3000A	TPDE-5000A
Rotating Speed	LCD Screen; 0-310rpm/min		LCD Screen; 0-200rpm/min
Evap. Capacity	Max.25ml/min (H ₂ O)	Max.27ml/min (H ₂ O)	Max.43ml/min (H ₂ O)
Temp. range/precision	Microcomputer PID controller; Water Bath: RT.-99℃±0.5℃		
Bath Material	Integral Teflon compound heating bath with safe handle, which prevents from scald; the medium sized bath volume makes distillation fast.		
Bath Size	φ23×13cm	φ26×15cm	φ29×17cm
Positive&Negative Rotating	Intermittent positive and negative rotating function with timing function (0-60s) for drying process of powder samples.		
Lift	Automatic balance lifting which can be controlled by either button-press or Color LCD screen; the lifting length is 150mm, with fixed safety distance of 50mm, which prevents crashing.		
Temp. Set	Rotating switch coding for temperature setting with big LCD screen display.		
Safety	Anti-dry prevention function which makes flask automatic lifting; instrument will stop at the set timing (0-999min); automatic lifting and standby alarm protection in abnormal or over temperature state.		
Heater Power	1.5KW	1.5KW	1.5KW
Flask Volume	0.25--2L	0.25--3L	0.25--5L
Sealing	Imported PTFE and special complex compounded with special technique, which ensures good sealing and improves the anti-corrosion and durability property.		
Condenser	Vertical 3-layered coil condenser with big condensation area, equipped with drip point and backflow prevention, which effectively increases the evaporation efficiency.		
Condense Area	0.18m ²	0.21m ²	0.31m ²
Environment Temp.	5℃-40℃		
Factory Configuration	29#Eggplant Shaped Flask1L*1 29# Flange mouth Round Bottom Flask 2L*1 S35Ball mill mouth Receiving Flask 1L*1	29#Eggplant Shaped Flask1L*1 F50Flange mouth Round Bottom Flask3L*1 S35Ball mill mouth Receiving Flask 2L*1	29#Eggplant Shaped Flask1L*1 F50Flange mouth Round Bottom Flask5L*1 S35Ball mill mouth Receiving Flask:3L*1
Input	AC220V/50HZ		
Optional: Vacuum controller for precise vacuum control. Warning: The protection cap is only for water bath experiment. Please do not use in oil bath experiment.			

◆ TPDE-10-50L Series

The novel floor type evaporator adopts big sized rotating flask to increase the evaporation area. With flask rotating in heated water bath under vacuum condition, the liquid material in flask evaporates fast.

This series big sized rotary evaporator is an ideal instrument for drying, concentration, and recovery experiments in pharmaceutical, chemical, colleges, scientific research laboratories and other industries.



Features

1. Big LCD screen with menu interface and multi-functional operation system; rotary switch easy to operate.
2. Unattended mode with safe operation function, which is in stop mode after the experiment, with automatic lifting function to standby mode and protection alarm function. (50L does not have this feature)
3. Humanized design: vacuum controller and diaphragm pump can be put in the space under shelf; universal wheels with lockable casters and positioning device, which makes the equipment steady and easy to move.
4. Sealing made up of imported PTFE and special compound by special technique, which has good sealing, anti-corrosion, high temperature resistance and good durability.
5. Pressure valves ensure continuous receiving and discharge without affecting the system pressure and distillation process.
6. Safety protection function in over-current, overload and fuses; dry heating preventer; outage in unit exception or over temperature and alarming standby function.
7. Intermittent positive and negative rotating function with timer (0-60s) for drying process of powder materials.
8. Integral heating bath with Teflon coating, which is easy to clean, anti-corrosive and high temperature resistant as well. Furthermore, it can also prevent cross infection in experiment.
9. Vertical condenser with big condensation area and fast evaporation speed, which is easy to install as well.
10. Automatic lifting function with safety distance setting, which can be easily lifted smooth and steady.

Technical Parameter

Model	TPDE-5210A	TPDE-5220A	TPDE-5250A
Lift	Automatic lifting with lifting length of 150mm	Automatic lifting with lifting length of 190mm	Automatic and manual lifting with lifting length of 180mm
Rotating Speed	10~180rpm/min		10~110rpm/min
Evap. Capacity	Max.3.5L/min (H ₂ O)	Max.5L/min (H ₂ O)	Max.9L/min (H ₂ O)
Temp. range/precision	Microcomputer PID controller; LCD Screen; Water Bath: RT, -99℃±1℃		
Bath Material	Integral 304 stainless steel heating bath, which is anti-corrosive, high temperature resistant and easy to clean		
Bath Size	Φ35*22cm	Φ45*26cm	Φ55*32cm Teflon coating bath
Positive&Negative Rotating	Intermittent positive and negative rotating function with timing function (0-60s) for drying process of powder samples.		
Heater Power	3.5KW	5KW	6KW
Flask Volume	5-10L	5-20L	10-50L
Condenser	Vertical integral 3-layered coil condenser with big condensation area and fast evaporation speed, which is easy to install as well.		
Feeder	Valve type leading pipe equipped with tetrafluoroethylene pipe and wafer retaining ring		
Sealing	Imported PTFE and special complex compounded with special technique, which ensures good sealing and improves the anti-corrosion and durability property.		
Condense Area	0.18m ²	0.21m ²	0.31m ²
Environment Temp.	5℃~40℃		
Factory Configuration	95# Flange mouth Rotating Flask 10L*1 Receiving Flask 5L*1	125# Flange mouth Rotating Flask 20L*1 Receiving Flask 10L*1	125# Flange mouth Rotating Flask 50L*1 Receiving Flask 20L*1
Total Power	3.8KW	5.3KW	6.3KW
Input	AQ220V/50HZ		

◆ TPDE-DQ Series

TPDE-DQ series is a new type rotary evaporator developed by our company, which can be used for the concentration of 5 materials at the same time. Apart from the elegant appearance with compact design, easy operation, precise temperature control, reliable capability, the practical and humanized design and durability, xiande-DQ series rotary evaporator(5*50ml, 5*100ml, 5*150ml sized optional) is also with the following



Features

1. Big LCD screen with menu interface displaying several data, rotary switch easy to operate
2. Heating bath with Teflon coating, which is easy to clean, anti-corrosive and high temperature resistant as well
3. Temperature of xiande-DQ series can reach up to 99℃. Heater stop heating in over temperature condition
4. Special design of bottle pulling switch, which is easy to disassemble the evaporation flask.
5. Sealing made up of imported PTFE with special technique
6. Both screen touch control and button press automatic lifting available, easy and safe to use.
7. DC rotating motor of 70w power starts steadily
8. Vertical condenser with drip point design prevents backflow
9. Intermittent positive and negative rotating function with timer function for drying process, maximum rotating speed up to 310rpm/min
10. Vacuum degree can be controlled with the vacuum gauge and vacuum valve, which can prevents pump oil from backflow and improves the success rate of experiment.
11. Heating bath with safe handle, which is heat insulated and prevents scald. The medium sized heating bath helps heating fast.
12. Equipped with protection cap, which is heat preserved, energy saving and anti-spill and anti-boiling.

Technical Parameter

Model	TPDE-2000ADQ	TPDE-3000ADQ	TPDE-5000ADQ
Rotating Speed	LCD Screen; 0~310rpm/min		LCD Screen; 0~200rpm/min
Evap. Capacity	Max 25ml/min (H ₂ O)	Max 27ml/min (H ₂ O)	Max 43ml/min (H ₂ O)
Temp. range/precision	Microcomputer PID controller; Water Bath; RT~99℃±0.5℃		
Bath Material	Integral Teflon compound heating bath with safe handle, which prevents from scald; the medium sized bath volume makes distillation fast.		
Bath Size	φ 23 × 13cm	φ 26 × 15cm	φ 29 × 17cm
Positive&Negative Rotating	Intermittent positive and negative rotating function with timing function (0~60s) for drying process of powder samples.		
Lift	Automatic balance lifting which can be controlled by either button-press or Color LCD screen; the lifting length is 150mm, with fixed safety distance of 60mm, which prevents crashing.		
Temp. Set	Rotating switch coding for temperature setting with big LCD screen display.		
Safety	Anti-dry prevention function which makes flask automatic lifting; instrument will stop at the set timing (0~999min); automatic lifting and standby alarm protection in abnormal or over temperature state.		
Heater Power	1.5KW	1.5KW	1.5KW
Flask Volume	5*50ML(0.25~4L)	5*100ML(0.25~3L)	5*150ML(0.25~5L)
Sealing	Imported PTFE and special complex compounded with special technique, which ensures good sealing and improves the anti-corrosion and durability property.		
Condenser	Vertical 3-layered coil condenser with big condensation area, equipped with drip point and backflow prevention, which effectively increases the evaporation efficiency.		
Condense Area	0.18m ²	0.21m ²	0.31m ²
Environment Temp.	5℃~40℃		
Factory Configuration	24#Eggplant Shaped Flask 5*50ML 29# 5 heated flask*1 S35Ball mill mouth Receiving Flask 1L*1	24#Eggplant Shaped Flask 5*100ML 29# 5 heated flask*1 S35Ball mill mouth Receiving Flask 2L*1	24#Eggplant Shaped Flask 5*150ML 29# 5 heated flask*1 S35Ball mill mouth Receiving Flask 3L*1
Input	AC220V/50HZ		

◆ TPDESY Series

Features

1. Big LCD screen with menu interface displaying several data; rotary switch easy to operate.
2. Heating bath with Teflon coating, which is easy to clean, anti-corrosive and high temperature resistant as well.
3. Unattended mode with safe operation function, which is in automatic standby mode after the experiment.
4. Special design of bottle pulling switch, which is easy to disassemble the evaporation flask.
5. Sealing made up of imported PTFE with special technique.
6. Both screen touch control and button press automatic lifting available, easy and safe to use.
7. DC rotating motor of 70w power starts steadily.
8. Vertical condenser with drip point design prevents backflow.
9. Intermittent positive and negative rotating function with timer function for drying process.
10. Optional, vacuum controller for precise control of vacuum degree.
11. Heating bath with safe handle, which is heat insulated and prevents scald.
12. Oil and water heating bath in medium size for flash distillation, whose temperature range is from room temperature to 210°C.



Technical Parameter

Model	TPDESY-2000A	TPDESY-3000A	TPDESY-5000A
Rotating Speed	LCD Screen; 0~310rpm/min		LCD Screen; 0~200rpm/min
Evap. Capacity	Max.25ml/min (H2O)	Max.27ml/min (H2O)	Max.43ml/min (H2O)
Temp. range/precision	Microcomputer PID controller; Water Bath: RT.~99℃ ±0.5℃; Oil Bath: RT.~210℃ ±2℃		
Bath Material	Integral Teflon compound heating bath with safe handle, which prevents from scald; the medium sized bath volume makes distillation fast.		
Bath Size	φ 23 × 13cm	φ 26 × 15cm	φ 29 × 17cm
Positive&Negative Rotating	Intermittent positive and negative rotating function with timing function (0~60s) for drying process of powder samples.		
Lift	Automatic balance lifting which can be controlled by either button-press or Color LCD screen; the lifting length is 150mm, with fixed safety distance of 50mm, which prevents crashing.		
Temp. Set	Rotating switch coding for temperature setting with big LCD screen display.		
Safety	Anti-dry prevention function which makes flask automatic lifting; instrument will stop at the set timing (0~999min); automatic lifting and standby alarm protection in abnormal or over temperature state.		
Heater Power	1.5KW	1.5KW	1.5KW
Flask Volume	0.25—2L	0.25—3L	0.25—5L
Sealing	Imported PTFE and special complex compounded with special technique, which ensures good sealing and improves the anti-corrosion and durability property.		
Condenser	Vertical 3-layered coil condenser with big condensation area, equipped with drip point and backflow prevention, which effectively increases the evaporation efficiency.		
Condense Area	0.18m²	0.21m²	0.31m²
Environment Temp.	5℃-40℃		
Factory Configuration	29#Eggplant Shaped Flask1L*1 29# Flange mouth Round Bottom Flask 2L*1 S35Ball mill mouth Receiving Flask 1L*1	29#Eggplant Shaped Flask1L*1 F50Flange mouth Round Bottom Flask3L*1 S35Ball mill mouth Receiving Flask 2L*1	29#Eggplant Shaped Flask1L*1 F50Flange-mouth Round Bottom Flask5L*1 S35Ball mill mouth Receiving Flask:3L*1
Input	AC220V/50HZ		
Optional: Vacuum controller for precise vacuum control. Warning: The protection cap is only for water bath experiment. Please do not use in oil bath experiment.			

COOLING CIRCULATOR

◆ TDYQ Series

TDYQ series cooling circulator is a low temperature liquid circulation equipment with mechanical refrigeration method, which can provide low temperature liquid or low temperature bath. TDYQ series cooling circulator can be used with rotary evaporator, freeze dryer, water circulation vacuum pump and magnetic stirring in the chemical reaction and medicine reservoir under low temperature condition. Big sized cooling circulator is with constant current and constant pressure, whose circulating liquid can meet the cooling requirement of valuable instruments like electron microscope, electron probe, ultra-high vacuum sputtering apparatus, X-ray machine, laser and accelerator. TDYQ series cooling circulator can also provide cooling liquid with requested temperature and pure water for big instruments in purifying high pure metal and rare material, in environmental experiments, magnetron sputtering and vacuum coating. This series instrument is especially suitable for chemical, biological and physical laboratories which requires low temperature or normal temperature experiments. And also an essential instrument in chemical industry, food industry, metallurgy industry, colleges and universities, scientific research, genetic engineering and polymer engineering laboratory.



Features

- 1 Totally closed compressor group and water circulation pump, which has advanced property and reliable performance.
- 2 The key components of refrigerating unit, like relays, protectors, capacitors and refrigeration parts are all quality components imported.
- 3 Digital display temperature with microcomputer temperature control, which is easy to operate and eye-catching.
- 4 The circulation system is made of anti-corrosion material, which is rust-proof, anti-corrosion and pollution free against low temperature liquid.
- 5 Energy saving: TDYQ series cooling circulator can prevent fouling and pollution in water shortage, poor water quality and poor water pressure circumstances, so that the big precision equipment can be protected in good operation under high temperature or other poor working environment.
- 6 All models can be customized with different lowest temperature, refrigerating capacity and water tank volume.

Parameters

Model		TDYQ-3/15	TDYQ-5/10	TDYQ-5/20
Working Temperature	℃	-15℃—RT	-10℃—RT	-20℃—RT
Environment Temp.	℃	5.....32		
Temperature display		High precision LCD Screen		
Temperature Precision	k	0.1		
Temperature stability	k	±0.5		
Temperature sensor		Pt100		
Coolant		R404A/ethyl alcohol		
Coolant weight	g	220		
refrigerating capacity	W	510—1000	280—1100	550—1240
Max. Flow Rate	L	20(0bar)		
Pump pressure	bar	0.3		
Pump extraction	bar	0.2		
Storage tank volume	L	3	5	
Size (LWH)	mm	420*225*425	400*260*540	400*320*650
Weight	kg	30	40	45
Voltage	VAC	220		
Frequency	Hz	50/60		
Input power	W	540	530	630

VACUUM CONTROLLER



TPDE.VC-3000pro

Vacuum controller



TPDE.GMVC-3000pro

Vacuum pump with controller



TPDE.GMVC-3000RM

Vacuum pump with controller
and solvent recovery

- 1) Imported key components with precise control, anti-corrosion and durability property.
- 2) Big color LCD touch screen displaying the detected vacuum degree and set vacuum degree. Vacuum degree can be adjusted easily on the LCD screen.

The solvent recovery design in Vacuum pump with controller can condense the vapor again and recycle the waste gas. So the collection rate is improved and the environment is protected.

Features

1. Host: integral vacuum control system with high control precision, anti-corrosion and long service life.
2. Big color LCD touch screen displaying the detected vacuum degree and set vacuum degree. Vacuum degree can be adjusted easily on the LCD screen.
3. Can be connected with vacuum pump and use with rotary evaporator, to achieve precise control of the vacuum degree of rotary evaporator. So the collection rate of low boiling point materials (such as methylene dichloro, benzene, trichloroethane and ethanol) can be increased. Inert gas can be injected to avoid inner material from pollution and oxidation.
4. The process control of 5 stages gradient distillation (with time and vacuum set at certain figures) can be carried out during the vacuum distillation of synthetic experimental chromatography, with vacuum degree controlled step by step.
5. Menu operation: English and Chinese operation menu can be switched easily.
6. Operation vacuum degree and operation pressure can be switched easily.
7. Vacuum degree change can be checked in graphic form, which is vivid.
8. USB interface can be used for data output.
9. The vacuum pump with controller and solvent recovery consists of a vacuum controller, a diaphragm pump, A coil condenser, a S35 receiving flask 500ml and a waste absorption equipment. Apart from vacuum control, it also improves the collection rate, reduced environment pollution. The self circulating purification system also prevent waste leakage from going into diaphragm and cause breakage.

Technical parameter

Model	TPDE.VC-3000pro	TPDE.GMVC-3000pro	TPDE.GMVC-3000RM
Host display	5.5inch LCD color touch screen with independent intelligent vacuum control system.		
Vacuum adjust range	0~760mmHg(Torr), 0~1013hPa(mbar) 0~101.3kPa, 0~-0.01Mpa		
Vacuum detect range	1~800mmHg(Torr), 1~1066hPa(mbar) 0~106.6kPa, 0~-0.01Mpa		
Max. Vacuum degree	6mbar		
voltage	AC 220V		
frequency	50Hz		
Rated Power	≤3KW		
Application	Strong acid, alkali containing gas		
Diaphragm material	PTFE		
Environment temp.	5~40℃		
Protection degree	IP20		
Standby power	3W		
Max. extraction	20L/MIN		
Total power	130W		
Configuration	Vacuum controller*1	Vacuum controller*1, Diaphragm pump*1	Vacuum controller*1, Diaphragm pump*1, Coil condenser*1, S35 Receiving flask 500ml*1, Waste absorption*1 set
Noise	55db		

ANTI-CORROSION DIAPHRAGM PUMP

◆ TDGM-20

Diaphragm vacuum pump is designed according to the principle of positive displacement pump. Driven by the motor, the connecting rod moves up and down continuously, which makes the diaphragm open and close. In this way, the change of diaphragm chamber volume makes the medium pressure change and drives the inhale and discharge. So that the vacuum condition is formed inside the connected instruments.

Key technology

1. Teflon compound diaphragm which has strong anti-corrosion capability.
2. Fatigue resistance property which effectively prolongs the service life of diaphragm pump. Without oil mist pollution.
3. Compared with rubber diaphragm pump, Teflon compound diaphragm pump is better in sealing, anti-corrosion and durability.

Features and advantages

1. Can resist strong chemical corrosion.
2. Pollution and maintenance free.
3. Low noise and vibration.
4. Over temperature protection.

Technical parameter

Max. Flow rate	20L/min
Voltage	110V/230V
Frequency	50Hz
Power	130W
Pump type	Double stage pump
Max. Vacuum degree	8mbar
Max. pressure	1 bar
Application	Strong acid, aisea containing gas
Interface diameter	10mm

Environment temp.	5℃ - 40℃
Environment humidity	<80%
Pump head material	PTFE
Diaphragm material	PTFE (can be customized)
valves material	FFPM (can be customized)
Working type	Continuous working
noise	<70db
Max rotating speed	1450 RPM



AUTOMATIC WATER DISTILLER

◆ SZ Series



SZ-96



SZ-93



SZ-97

1. The SZ series automatic pure water distiller is heated with quartz heating tube, which is energy-saving, pure, durable and of high radiation rate.
2. The adoption of stainless steel in supporting shelf and clamp; special engineering plastics made of control panel and main distiller body made of quality glass.
3. The pure water distilled does not contact with any metal products.
4. The SZ series automatic water distiller is ideal for the distillation of pure water.
5. With different requirement of the pure water, SZ series automatic water distiller can be classified into the following 3 types:

Single stage automatic pure water distiller	Double stage automatic pure water distiller	Triple stage automatic pure water distiller
Pure water	Purer water	Purest water

6. All SZ series automatic pure water distiller is equipped with reply protection, which is safe and reliable to use.
7. The distiller switch can be controlled with temperature controller and spring gauge controller, which helps avoid glass breakage caused by dry heating of loop heat pipe.
8. Power supply will be automatically connected or cut off in high water line or low water line. So the pure water distiller is fully automatic.

Technical parameter

Model	SZ-96	SZ-93	SZ-97
Flow rate	1800ml/h	1800ml/h	1500ml/h
Input power	1.5Kw	3Kw	4.5Kw
Voltage	AC220v/50Hz	AC220v/50Hz	AC220v/50Hz

PRECISION GLOSSMETER

◆ WG60A

WG60A adopts LED light source, with good repeatability, small volume, high precision and good stability. It is mainly applicable to the measurement of specular gloss of non-metallic materials and metals such as coatings, inks, baking paints, coatings, wood products, marble, granite, vitrified polished bricks, ceramic bricks and plastics.



Characteristic

- 1 **Portable**
Precision design Ergonomic, moderate weight, comfortable hand feel, clear and simple operation interface and good human-computer interaction interface;
- 2 **Accuracy**
Repeat $\square$ Gu less than 0.2 The core technology makes the obtained data more accurate, allows you to accurately locate, eliminates the unstable factors of manual operation, and makes the measured data more accurate!
- 3 **Personalized customization**
According to the user's needs, manually input the gloss data of the standard sample for detection
- 4 **Super large storage**
50000 test records can be stored. The storage structure is: 100 standard samples, and 500 groups of test data can be stored under each standard sample;
- 5 **More functions**
Data browsing and viewing function, automatic shutdown function, low battery prompt function, full storage data space prompt function, etc
- 6 **Powerful PC software**
USB communication interface is connected to PC gloss analysis software, which can detect, analyze, store, print and other functions with one key

Technical parameter

Model	WG60
Range	0-200Gu
Scope of application	It is suitable for measuring the surface specular gloss of non-metallic materials such as coatings, inks, baking paints, coatings, wood products, marble, granite, ceramic tiles, plastics and paper.
Size	122x34x60mm
Projection angle	60°
Measuring spot	(ellipse: long axis $\times$ short axis) 9mm $\times$ 15mm measuring aperture: 40mm $\times$ 12mm
Measurement mode	Automatic measurement, manual measurement, single measurement and average measurement, and can realize cross setting for measurement, providing a variety of combined measurement modes.
Data storage	100 groups Any stored data can be set as standard sample to customize the tolerance range
Language	English
Output	It can be connected to a micro printer to realize the real-time output of measurement data
Division value	0-100: 0.1Gu, 100-200:1.0
Repeatability	0.5Gu
Reproducibility	0.4Gu
International standard	ISO-2813, ASTM-C584, ASTM-D523, JIS Z8741, DIN-67530, ASTM-D2457, JND-A60, JND-P60
Power	Power adapter

◆ WG68

Wg68 adopts LED light source with good repeatability, small volume, high precision and good stability. It is mainly applicable to the measurement of surface specular gloss of metallic and non-metallic materials such as coatings, inks, baking paints, coatings, wood products, marble, granite, vitrified polished bricks, ceramic bricks, plastics and paper



Characteristic

- 1 **Multi angle**
The three incident angles of the specular glossometer are 20°, 60° and 85° respectively
- 2 **Accurate and fast**
One key measurement: one operation can complete the measurement of triangulation at the same time; The incident angle of measuring light shall comply with the three incident angles of measuring light specified in ISO 2813. Repeat Δ Gl less than 0.2. The core technology makes the obtained data more accurate, allows you to accurately locate, eliminates the unstable factors of manual operation, and makes the measured data more accurate!
- 3 **Multi mode**
Optional angle mode: measurement angle or angle combination (sampling, statistics, continuous mode, etc.) statistics to meet various needs of measurement;
- 4 **Personalized customization**
According to the user's needs, manually input the gloss data of the standard sample for detection;
- 5 **Humanized design**
Ergonomic, moderate weight, comfortable hand feel, clear and simple operation interface, good human-computer interaction interface;
- 6 **Super large storage**
The triangulation can store 50000 test records. The storage structure is: 100 standard samples, and 500 groups of test data can be stored under each standard sample;
- 7 **More functions**
Data browsing and viewing function, automatic shutdown function, low battery prompt function, full storage data space prompt function, etc
- 8 **PC powerful software**
USB communication interface is connected to PC gloss multi-functional color analysis software, which can perform more functions such as detection, analysis, storage, printing and so on.
- 9 **Attachment description**
Power adapter: Standard + 5V, 2A external power supply;
Standard plate: provide calibration standards for instruments;
Data line: communication line between instrument and PC

Technical parameter

Range	20° :0-2000 60° :0-1000 85° :0-160
Scope of application	It is suitable for measuring the surface specular gloss of metal materials such as coatings, inks, baking paints, coatings, wood products, marble, granite, vitrified polished brick, ceramic brick, plastic, paper and so on.
Size	159x49x72mm measuring caliber: 6.1cmx1.4cm
Projection angle	20° 60° 85°
Measuring spot	(ellipse: major axis*minor axis) 20° : 10x10 60° : 9x15 85° : 5x38
Measurement mode	Automatic measurement, manual measurement, sampling measurement, statistical measurement and continuous measurement can realize cross setting for measurement and provide multiple combined measurement modes.
Data storage	5000 groups Any stored data can be set as standard sample to customize the tolerance range
Language	English
Output	It can be connected to a micro printer to realize the real-time output of measurement data
Division value	0-100:0.1; 100-2000:1.0
Repeatability	0-100:0.2 >100:0.2%
Reproducibility	0-100:0.5, 100-2000: 0.5%
International standard	ISO-2813, ASTM-C584, ASTM-D523, JIS Z8741, DIN-67530, ASTM-D2457, JND-A60, JND-P60
Power	AA Battery * 2
Storage temperature	-20℃-50℃ (-4 -122 ℉)
Working temperature	0℃-40℃ (32 -104 ℉)
Relative humidity	Relative humidity lower than 85%, no condensation

GLOSSMETER

◆ WG60

WG60A adopts LED light source, with good repeatability, small volume, high precision and good stability. It is mainly applicable to the measurement of specular gloss of non-metallic materials and metals such as coatings, inks, baking paints, coatings, wood products, marble, granite, vitrified polished bricks, ceramic bricks and plastics.



Characteristic

- ① **Humanized appearance design**
The volume is small, the metal shell is more high-grade and beautiful, the one button operation is very simple, and the ergonomic design brings you a comfortable user experience.
- ② **Excellent stability**
Accurate industrial structure design ensures the stability of instrument testing.
- ③ **More accurate core technology**
The core technology makes the data more accurate. The horizontal design allows you to accurately locate, eliminate the unstable factors of manual operation, and make the measurement data more accurate.
- ④ **High performance lithium battery**
Low power consumption design, high performance lithium battery, can be tested 5000 times when fully charged, which is more convenient for long-time measurement and reduces cost.
- ⑤ **PC software expansion function**
External micro printer for data real-time printing, analysis and storage.

Technical parameter

Model	WG60
Range	0-200Gu
Scope of application	It is suitable for measuring the surface specular gloss of non-metallic materials such as coatings, inks, baking paints, coatings, wood products, marble, granite, ceramic tiles, plastics and paper.
Size	122x34x60mm
Projection angle	60°
Measuring spot	(ellipse: long axis * short axis) 9mm x 15mm measuring aperture: 40mmx12mm
Measurement mode	Automatic measurement, manual measurement, single measurement and average measurement, and can realize cross setting for measurement, providing a variety of combined measurement modes.
Data storage	100 groups Any stored data can be set as standard sample to customize the tolerance range
Language	English
Output	It can be connected to a micro printer to realize the real-time output of measurement data
Division value	0-100: 0.1Gu; 100-200: 1.0
Repeatability	0.5Gu
Reproducibility	0.4Gu
International standard	ISO-2813, ASTM-C584, ASTM-D523, JIS Z8741, DIN-67530, ASTM-D2457, JND-A60, JND-P60
Power	Power adapter

COLORIMETER/SPECTROPHOTOMETER

◆ WN700D

WN700D adopts advanced electronic circuit system and perfect optical system. It has the advantages of high precision, good stability and strong anti-interference. It provides great reliability and convenience for color quality control in all walks of life.

Characteristic



- 1 Stability ($\Delta E < 0.07$)**
The independent innovation patent is adopted to intelligently monitor the electronic circuit system and optical system of the whole instrument, so as to ensure that the instrument is not affected by the external environment during each measurement, so as to achieve high stability $\Delta E < 0.07$.
- 2 Inter station difference ($\Delta E < 0.4$)**
Inter station difference refers to the difference between the measured data of each instrument. During product processing and production, the quality of each instrument shall be strictly controlled; When the products are delivered from the warehouse, the quality inspection of each instrument shall be strictly controlled; Ensure that the difference between each instrument is reduced, so as to create a reliable data communication environment for instrument users.
- 3 Advanced power management system, stable and safe**
Wn700d spectrophotometer has three power supply modes: 3200mah rechargeable lithium battery, External 5V DC power supply; Lithium battery and external 5V DC power supply supply at the same time. The lithium battery can be measured more than 10000 times after charging once. The instrument is equipped with an overvoltage protection system. When the customer connects the wrong power supply, the overvoltage system inside the instrument will start, so as to protect the instrument from burning out.
- 4 Accurate spectral data and lab values**
Sampling high-precision spectral spectroscopic system and stable optical system to accurately separate light waves of different wavelengths, so as to obtain accurate spectral data and lab values.
- 5 Average measurement function**
Wn700d spectrophotometer has the average measurement function, and the average measurement times can be set to 1-99 times.
- 6 Multiple measuring light sources and color rendering parameters**
Six light sources A, C, D50, D65, F2 (CWF) and F12 (U30) and three color rendering parameters ($L^*a^*b^*$, $L^*c^*h^*$ and XYX) are built in the instrument, which can meet the different color measurement needs of users. In addition, there are two CIE observer angles (10° and 2°) and two color difference formulas in the instrument (ΔE^*AB and ΔE^*ch) can be selected by the user.
- 7 Humanized appearance design, small fuselage, large purpose**
Ergonomically designed fuselage brings you more comfortable measurement experience. It adopts 2.8-inch TFT color display screen and graphical user interface to realize easier operation for you. Small fuselage, big use. Small size, light weight and easy to carry.
- 8 Extended function, comprehensive and practical**
Wn700d spectrophotometer can communicate with the upper computer software (optional) on the computer side, expand the functions of the instrument by using the computer software, and realize the functions of data analysis, upload, download, printing and manual input of lab value. It can also be connected with micro printer (optional), which can realize real-time printing of measurement data.

Technical parameter

Geometric conditions	CIE recommended lighting receiving mode: D/8
Color space	CIEL [*] a [*] b [*] , CIEL [*] C [*] h, YXY
Standard light sources	A, C, D50, D65, F2 (CWF) and F12 (U30)
Light source	combined LED
Color difference formula	CIE ΔE^*ab , CIE ΔE^*Ch
Measuring caliber	Φ4/Φ8/Φ16mm optional, non switchable
Sensor	linear array CMOS@256 pixel
Light splitting mode	concave diffraction grating
Observers	CIE10° standard observer, CIE2° standard observer
Wavelength range	400nm - 700nm
Wavelength interval	10nm
Measurement interval	2.5 seconds
Reflectivity range	0% - 200%
Repetition accuracy	$\Delta E = 0.07$ (measured the whiteboard 40 times and take the average deviation)
Inter station difference	$\Delta E < 0.4$ (RAE 12 color block)

◆ WS Series

WS series is a portable spectrophotometer, which is suitable for quality control and color evaluation of different measurement planes in various industries. WS series has many functions and is easy to carry. It is suitable for fast, portable and accurate color control. Usage: measure the standard sample first, and then measure the sample. The color difference value will appear on the color LCD.



Characteristic

1 Accurate data

The self-developed spectral detection core is adopted, combined with the standard data of China Institute of testing technology to achieve more accurate color parameter measurement;

2 Data consistency

Each colorimeter has been carefully debugged and strictly quality controlled. Up to 24 color blocks (also standard 24 color card) are used for data consistency inspection to ensure data consistency.

3 Humanized appearance design

Ergonomically designed fuselage brings you more comfortable measurement experience. It adopts TFF color HD display screen and graphical user interface to realize easier operation for you. Small size, light weight and easy to carry;

4 Low power design

The low-power design principle is adopted, and the low-power design is deep into each module. When the lithium battery is fully charged, it can be measured more than 10000 times. Low power LED light source design, lower power consumption and longer service life (more than 20000-50000 hours), which is convenient for long-time mobile and outdoor measurement;

5 Rapid measurement

The spectral detection core adopts high sensitivity design, which improves the detection sensitivity by 5 times, realizes more sensitive and faster measurement, and the measurement interval is less than 2.5 seconds.

6 Excellent stability

The electronic system adopts the mainstream arm + FPGA architecture, which has the characteristics of large data throughput, stable operation, high system reliability and strong anti-interference ability. The spectrum detection core adopts correlation double sampling technology to effectively suppress external interference and system noise. It is an advanced weak signal detection technology;

7 More accurate spectral data and more accurate lab value

The high-precision diffraction grating with 1200 lines is used for light splitting to better separate light waves with different wavelengths. The highly sensitive 2048 pixel CCD sensor is used to detect spectral data more accurately and obtain accurate color information.

8 Richer display content

The measurement interface displays standard sample data, sample data, measurement conditions, reflection spectrum curve and color simulation at the same time, so as to realize the presentation of all color information of one measurement. Multiple color spaces, standard light sources and color difference formulas are available to meet the various needs of customers.

9 High performance lithium battery

Low power design, high-performance lithium battery, fully charged, can carry out more than 10000 measurements, which is convenient for long-time mobile and outdoor measurements.

Model	WS2300	WS2600
Geometric conditions	CIE Recommended lighting receiving method: d/8	CIE Recommended lighting receiving method: d/8
Color space	CIEL*a*b*, CIEL*C*h, Hunterlab	CIEL*a*b*, CIEL*C*h, CIEL*u*v*, HunterLAB, CIEXYZ, CIExy, reflectivity, CMYK, Ganz whiteness, R457 whiteness (ISO brightness), Taube whiteness, Z whiteness, sRGB
Standard light source	A, D65, D50 F1 F4 F11	A, C, D50, D55, D65, D75, F1, F2 (CWF), F3, F4, F5, F6, F7, F8, F9, F10, F11 (TL84/TL84), F12 (U30)
Light source	Combined LED	Combined LED
Colour-difference formula	CIE ΔE^*ab , CIE ΔE^*Ch CIE $\Delta E_{CMC}(2:1)$	ΔE^*ab , ΔE^*Ch , ΔE^*uv , $\Delta E^*Hunter$, ΔE^*CMC21 , ΔE^*CMC11 , ΔE^*94 , ΔE^*00 , ΔE^*sRGB , ΔE^*BFD , ΔE^*FMCII
Measuring caliber	ϕ 8mm ϕ 4mm ϕ 16mm Optional	ϕ 8mm ϕ 4mm (switchable) ϕ 16mm (fixed and non switchable)
Light containing mode	SCI	SCI/SCE
Sensor	Linear array CCD@2048 pixel	Linear array CCD@2048 pixel
Spectroscopic mode	diffraction grating	diffraction grating
Observer	CIE10° Standard observer, CIE2° Standard observer	CIE10° Standard observer, CIE2° Standard observer
Wavelength range	400nm~700nm	400nm~700nm
Wavelength interval	10nm	10nm
Measurement interval	2.5s	2.5s
Measuring range	L: 0至100	L: 0至100
Repetition accuracy	$\Delta E < 0.07$ (measure the whiteboard 30 times and take the average deviation)	$\Delta E < 0.05$ (measure the whiteboard 30 times and take the average deviation)
Inter station difference	$\Delta E < 0.4$ (REL12 Color card)	$\Delta E < 0.3$ (REL12 color card)
Light source life	More than 50000 hours	More than 50000 hours
Screen	TFT true color 2.8 inches @ (16:9)	TFT true color 2.8 inches @ (16:9)
Data storage capacity	100 standard samples / 16000 samples	100 standard samples / 16000 samples
Working temperature	0℃~40℃ (32 ~104)	0℃~40℃ (32°F~104°F)
Storage temperature	-20℃~50℃ (-4 ~122)	-20℃~50℃ (-4°F~122°F)
Humidity range	Relative humidity lower than 85%, no condensation	Relative humidity lower than 85%, no condensation
Weight	700g	700g
size	199*68*90mm	199*68*90mm
Standard accessories	Power adapter, standard whiteboard, standard black chamber, lithium battery, manual	Power adapter, standard whiteboard, standard black chamber, lithium battery, manual

COLORIMETER

◆ ColorCat Series

It can be applied to the testing work in a variety of industries.

Function



- 1 High end spectroscopic principle**
SCI light mode, all LED light source and UV lamp support, up to 34 color spaces.
- 2 Patented knob design**
Specially made knob / press integrated key in line with ergonomics, the operation is fast and efficient, and the measurement is completed with one key.
- 3 Quickly identify color number**
Connect the cloud color library card, check the color number immediately anytime, anywhere, and check the color number accurately.
- 4 App Bluetooth connection**
It supports Bluetooth connection function, one click connection with mobile app to analyze data, and the operation is simple and convenient.
- 5 USB computer software**
It is equipped with type-C interface, supports windows / IOS / Android, and has exclusive PC software to provide rich function expansion and report file output in various forms.
- 6 Massive color card library support**
Multiple color library data storage support, which can identify more than 10000 colors to ensure that all kinds of color test requirements are met.
- 7 Independent automatic calibration**
The system is automatically calibrated with one key.
- 8 Intelligent color difference calculation**
Automatically calculate the color difference results and display them with green / red background light.
- 9 Compact and convenient**
Φ The small size of 31x96mm weighs only 80g.
- 10 Measurement aperture protection**
The self-contained optical protective sheet protects the measuring aperture, moisture-proof, dust-proof and pollution-proof.

Model	ColorCat SE	ColorCat	ColorCat Pro
Geometric conditions	D / 8. SCI (including specular light)		
Measuring light source	Full spectrum LED		Full spectrum led + UV lamp
Measuring caliber	8mm		
Color space	CIE-Lab/CIE-Lch	CIE-Lab, CIE-Luh, luv, Hunter-Lab, XYZ, Yxy, sRGB, DINLAB99, DENSITY (A) C, M, Y, K, DENSITY (I) C, M, Y, K, Munsell, reflectivity (bright vision), blackness, YI yellowness, homochromatic spectrum (light jumping), hiding power, coloring power / strength / dye strength, color fastness, Taube whiteness, Berger whiteness, Tappi whiteness, Cros whiteness, Stephenser whiteness, Ganz whiteness Hunter whiteness, whiteness (ASTM), whiteness (CIE), AATCC whiteness, R457 / ISO2470 whiteness, GB / T17644 whiteness	
Colour-difference formula	ΔE^*ab	ΔE^*ab , ΔE^*ch , ΔE^*uv , $\Delta E^*HunterLab$, $\Delta E^*CMG(l:c)$, ΔE^*94 , ΔE^*00 , ΔE^*sRGB , ΔE^*BFD , ΔE^*FCMII , ΔE^*DIN99	
Standard light source	D65, A	A, D, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, U35, DLF, NBF, TL83, TL84	
Observer	10° (CIE1964)	10° (CIE1964) / 2° (CIE1931)	
Wavelength interval	10nm		
Wavelength range	400nm~700nm		
Calibration	Automatic		
Repetition accuracy	$\Delta E^*ab \leq 0.1$	$\Delta E^*ab \leq 0.08$	$\Delta E^*ab \leq 0.05$
Accuracy	Over metering is not guaranteed	Over metering	
Instrument standard sample library	N/A	YES	
Display accuracy	0.1		0.01
Measuring speed	1.5S	1.0S	0.5S
Operation mode	Rotary / press integrated		
Screen	OLED full color display 1.14 inches		
Battery capacity	Continuously measure 6000 times when fully charged		Continuously measure 10000 times when fully charged
Interface	Type C / Bluetooth		
Language	English		
App platform	Android/iOS/Windows		
Storage	AP		
Size	Φ31X96mm		
Weight	80g		

COATING THICKNESS GAUGE

◆ Wh82

The instrument is a portable measuring instrument, which can measure the coating thickness quickly, without damage and accurately. It can be used in both laboratory and project site. By using different measuring heads, it can also meet the needs of a variety of measurements. The instrument can be widely used in manufacturing, metal processing, chemical industry, commodity inspection and other testing fields. It is a necessary instrument for material protection specialty.



Characteristic

- 1 Magnetic and eddy current thickness measurement methods are adopted, which can measure the thickness of non-metallic coating on magnetic metal substrate and the thickness of non-metallic coating on non-magnetic metal substrate.
- 2 Zero point calibration and five point calibration can be used to calibrate the instrument, and the basic calibration method can be used to correct the systematic error of the measuring head to ensure the accuracy of the instrument in the measurement process.
- 3 It can quickly and automatically identify iron matrix (FE) and non-ferrous matrix (NFE).
- 4 It has the function of battery power indication.
- 5 Alarm can be set when the measured coating thickness exceeds the limit.
- 6 Measurement unit can be set (μm / mil) and system language (Simplified Chinese / English).
- 7 There are two shutdown modes: manual shutdown mode and automatic shutdown mode.
- 8 It has negative display function to ensure the calibration accuracy of the instrument at the zero point.

Parameters

Model	WH82
Measuring principle	Electromagnetic type (magnetic substrate) + eddy current type (non-magnetic substrate) Automatic recognition of magnetic and non-magnetic substrates
Measuring range	0-1500μm
Accuracy	Zero calibration: $\pm (1 + 3\% h)$ Five point calibration: $\pm [(1\% + 3\% h)] H + 1.5$
Bluetooth APP function	Connected app can display the maximum, minimum and average values of multiple tests, store data and generate reports
Power	AA Battery * 2
Metric and imperial unit conversion function	YES
Statistical function	Display the maximum, minimum and average values of multiple measurements
Operating ambient temperature	0℃-40℃
Relative humidity	≤85%
Minimum matrix	10mm*10mm
Minimum Curvature	Convex: 5mm concave: 5mm
Thinnest substrate	0.4mm
Weight	115g (with battery)
Size	110mm*65mm*30mm

◆ LCD Digital Hotplate HP500-PRO

Features and Benefits:

- ▶ LCD screen shows temperature, Max. temperature up to 500°C.
- ▶ 10-inch glass-ceramic work plate provides excellent chemical-resistant performance and the most efficient heat transfer.
- ▶ External temperature control is possible by connecting the temperature sensor (PT 1000) with accuracy at $\pm 0.2^{\circ}\text{C}$.
- ▶ The "HOT" warning will flash if the work plate temperature is above 50°C even when the hotplate is turned off.
- ▶ Data connector: The SD card also records the instrument's running data in real-time.



Technical Parameters:

Work plate Dimension (W x D)	254x254mm (10 inch)
Work plate material	Glass ceramic
Heating position	1
Heating temperature range	Room Temp.-500°C, increment 1°C
Temperature control accuracy	$\pm 1^{\circ}\text{C}$ (<100°C) $\pm 1\%$ (>100°C)
Safety temperature	540°C
Temperature, time display	LCD
Timer function	1min-99h59min
Temperature display accuracy	$\pm 0.1^{\circ}\text{C}$
External temperature sensor	PT1000 ($\pm 0.2^{\circ}\text{C}$)
"Hot" warning	50°C
Protection class	IP21
Power	1400W
Heating output	1350W
Voltage Frequency	100-120/200-240V 50/60Hz
Dimension (W x D x H)	328x424x138mm
Weight	7.18kg
Permissible ambient temperature and humidity	5-40°C, 80%RH

Features and Benefits:

- ▶ LED screen shows temperature.
- ▶ External temperature control is possible by connecting the temperature sensor (PT 1000) with an accuracy at $\pm 0.5^{\circ}\text{C}$.
- ▶ Glass ceramic work plate provides excellent chemical-resistant performance and most efficient heat transfer.
- ▶ The "HOT" warning will flash if the work plate temperature is above 50°C even when the hotplate is turned off.

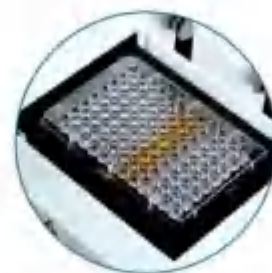


Technical Parameters

Work plate Dimension	184x184mm (7 inch)
Work plate material	Glass ceramic
Power	1010W
Heating Power	1000W
Voltage	100-120/200-240V, 50/60Hz
Heating position	1
Heating temperature range	Room temp.-550°C, increment 5°C
Control accuracy of work plate	$\pm 10^{\circ}\text{C}$
Safety temperature	580°C
Temperature display	LED
Temperature display accuracy	$\pm 1^{\circ}\text{C}$
External temperature sensor	PT1000 ($\pm 0.5^{\circ}\text{C}$)
Heating warning	50°C
Protection class	IP21
Dimension (W x D x H)	215x360x112mm
Weight	4.5kg
Permissible ambient temperature and humidity	5-40°C, 80%RH

AUTOMATIC ELISA ANALYZER

◆ HBS-1101



Features and Benefits:

- 7 inch color LCD display, touch screen operation.
- Visualization of panel and visualization of panel data.
- Center location, accurate data, good stability and good repeatability.
- Endpoint method, kinetic method, inhibition rate, single / dual wavelength measurement.
- Wide voltage design and global power supply.

Technical Parameters

- Lamp: DC12V 22W Tungsten halogen lamp.
- Optical path: 8 channel vertical light path system.
- Wavelength range: 400-1000nm (Selection: 340-1100nm).
- Reading range: 0-4.000Abs.
- Linear range: 0-3.000Abs.
- Filter: Default configuration 405, 450, 492, 630nm. Can be installed up to 10 filters.
- Vibration plate: Three kinds of linear vibration plate function, Adjustable 0-255 seconds.
- Display: 7 inch color LCD screen, display the entire board information, touch screen operation.
- Software: Professional software, Can store 200 groups program, 100000 sample results, More than 10 kinds of curve fitting equation.
- Power input: DC12V 5A.
- Weight: 6Kg.
- Resolution: 0.001Abs.
- Accuracy: $\leq \pm 0.01$ Abs.
- Stability: $\leq \pm 0.003$ Abs.
- Repeatability: $\leq 0.3\%$.
- Size: 400mm(L) * 260mm(W) * 200mm(H).

◆ HBS-1096

Features and Benefits

- ◇ Industrial grade color LCD display, touch screen operation.
- ◇ Eight channel optical fiber measurement system, imported detector.
- ◇ Center positioning function, accurate and reliable.
- ◇ Three kinds of linear vibration plate function.
- ◇ Unique open Cut-Off judgment formula, Think what you think.
- ◇ End point method, two point method, dynamics, single / dual wavelength test mode.
- ◇ Configure the inhibition rate measurement module, dedicated to the field of food safety, Medical testing and etc.



Main Parameters

- Lamp: DC12V 22W Tungsten halogen lamp.
- Optical path: 8 channel vertical light path system.
- Wavelength range: 400-1000nm (Selection: 340-1100nm).
- Repeatability: $\leq 0.3\%$.
- Stability: $\leq \pm 0.003$ Abs.
- Filter: Default configuration 405, 450, 492, 630nm. Can be installed up to 15 filters.
- Incubation function: room temperature +4℃~50℃, accuracy 37℃ ± 0.5 ℃ (Selection)
- Vibration plate: Three kinds of linear vibration plate function, Adjustable 0-255 seconds.
- Display: 8 inch color LCD screen, display the entire board information, touch screen operation.
- Software: Professional software, Can store 200 groups program, 100000 sample results, More than 10 kinds of curve fitting equation.
- Power input: AC100-240V 50-60Hz.
- Weight: 11Kg.
- Reading range: 0-4.000Abs.
- Linear range: 0-3.000Abs.
- Resolution: 0.001Abs.
- Accuracy: $\leq \pm 0.01$ Abs.
- Size: 433mm(L) * 320mm(W) * 308mm(H).

DOUBLE-BEAM UV-VIS SPECTROPHOTOMETER

◆ UV-1500

Features and Benefits

- single-chip microcomputer control, LCD Screen (128*64 Dots).
- A large LCD display can display multiple sets of data.
- Huge memory space to store multiple sets of data and curves.
- Auto zero, 100% adjustment function.
- Wavelength automatic adjustment.
- Wrap lights, automatic filter change, large sample pool (5mm ~ 100mm).
- Standard samples having a maximum ten-point standard curve measurement functions built.
- Direct input by K, B factor for quantitative measurement standard curve.
- Can be directly input and the corresponding standard concentration values establish a standard curve for quantitative measurement.
- Adjustable electric saving standard curve parameter measuring set can save a plurality of standard curve.
- Can be edited at any time of the standard curve, user-friendly.
- General Parallel printer interface with or slightly beat interfaces can print the title bar, the measurement data, curve parameters, the standard curve, and the curve sample points.
- With USB interface.
- PC control can be achieved through more accurate and flexible measurement requirements (standard)



Software features

- Wavelength Scan: the measured object can be 190nm~1100nm full band spectrum scan, can also be segmented scan.
- Kinetic tests: the time of the measured object scanning, timely detection of changes in concentration caused by changes in absorbance.
- Quantitative measurement: by establishing a standard curve, the concentration can be measured in the analysis was.
- Multi-wavelength testing: set a plurality of wavelengths simultaneously, the measured absorbance of a plurality of wavelengths in the test.
- DNA / protein test: the test formula purity of nucleic acid and protein concentration analysis of DNA / protein.

Technical Parameters

Wavelength Range	190~1100nm
Band Width	2nm
Wavelength Accuracy	±0.5nm
Wavelength Repeatability	≤0.2nm
Photometric Accuracy	±0.3% T
Photometric Repeatability	0.15% T
Stray Light	≤0.05% T (220nm NaI, 340nm NaNO ₂)
Stability	0.001A/h@500nm
Photometric Mode	T, A, C, E
Wavelength Setting	Automatic
Photometric Display Range	-0.3~3A
Display Mode	LCD Screen (128*64 Dots).
Detector	Import Silicon Photodiode
Light Source	Import Deuterium Lamp & Tungsten Halogen Lamp
Power Requirement	AC 220V/50Hz 110V/60Hz
Power	120W
Dimensions(W*D*H)	480×350×220mm
Weight	15Kg

DIGITAL ROTATION VISCOMETER

◆ NDJ -S Series

Introduction

The Digital Viscometer adopts advanced mechanical design technology, the display adopts blue backlight, high-brightness LCD display screen. This instrument has the characteristics of high measurement sensitivity, reliable test results, easy operation and beautiful appearance, etc. It is a precision instrument used to measure the absolute viscosity of Newtonian liquids and the apparent relative viscosity of non-Newtonian liquids. , paints, plastics, medicines, food, coatings, glues, adhesives, resins, chemical raw materials and other products.



Features

- ★ Lifting system adopts helical rack/helical gear mode
- ★ A universal joint is added to the interface connecting the rotor
- ★ The transmission gear is made of high-wear, high-performance engineering plastics
- ★ The rotor is made of imported 304 stainless steel
- ★ Digital blue backlight LCD screen
- ★ Microcomputer control technology, accurate data collecting

Technical parameter

Model	NDJ-5S	NDJ-9S	NDJ-8S
Power Supply	AC220V±10%, 50Hz±10%; 12W		
Display	LCD		
Measure range	1~1*10 ⁵ mPa.s		1~2*10 ⁶ mPa.s
Rotor	#1-4 rotor, #0 rotor (optional)		
Rotor speed	6, 12, 30, 60rpm		0.3, 0.6, 1.5, 3, 6, 12, 30, 60rpm
Accuracy	±2% (Newtonian liquid)		
repeatability error	±1% (Newtonian liquid)		
Timer range	40s~99min59s continuously		
temperature sensor	NO	YES	NO
RS232	Optional		
Working environment	5°C~35°C, ≤80%RH		
Outer shape	370×325×280mm; net weight 6.8kgs		

FLAME PHOTOMETER

◆ F-500

Features

The flame photometer is an instrument based on the emission spectrum. It uses the thermal energy provided by the flame itself to excite some of the atoms in the alkaline earth metal, so that these atoms will absorb energy and jump to the previous energy level. This released energy has a specific spectral characteristics of a certain wavelength range. The method of measuring the luminescence intensity of the specific spectrum of the element to carry out the element qualitative and quantitative analysis is called flame emission spectroscopy, and the analytical instrument made by flame spectroscopy is called flame photometer. For the flame photometer, although the content of the measured element is theoretically proportional to the intensity of its emission spectrum, because the flame temperature is not high and the excitation energy is low, it is generally only suitable for the quantitative analysis of alkali metals and alkaline earth metals in a certain concentration range.



Application

- ★ Analysis and determination of cement, glass, ceramics and refractory materials;
- ★ General survey of agricultural land and determination of soil fertility;
- ★ Laboratory tests in the pharmaceutical industry and food industry;
- ★ Clinical testing and experimental research;
- ★ Analysis and determination of petroleum, metallurgical and chemical products, etc.

Technical parameter

Stability	Standard solution for continuous injection, the relative maximum change of the displayed value of the instrument within 15 seconds is $\leq 3\%$; Measure 1 time per minute, 6 times in total, the relative maximum change of the displayed value of the instrument $\leq 15\%$
Repeatability	$\leq 3\%$
Respond time	$< 8\text{ s}$
Sample suction volume	$\sim 6\text{ ml/min}$
Elements included	K, Na, Li, Ca, Ba
Measuring Range	K:0 - 100 ppm; Na:0 - 100 ppm; Li:0 - 100 ppm; Ca:0 - 1000 ppm; Ba:0 - 3000 ppm
Detection limit	K:0.01 ppm; Na:0.01 ppm; Li:0.025 ppm; Ca:0.1 ppm; Ba:10 ppm
Device Size	520 × 350 × 480 mm
Net Weight	12 kg

FLAMEPHOTOMETER

◆ FP6410

Specifications

Range K: 0~999.9; **Na:** 0~999.9; **Li:** 0~999.9

Sensitivity: K: 0.2 μ g/mL; Na: 0.2 μ g/mL

Linearity: K: 0.2 μ g/mL; Na: 0.7 μ g/mL

Drift: less than 3% within 15s

Reproducibility: 3%

Aspiration rate: <6mL/min

Fuel supply: L.P.G.



Overall dimension & weight

Shipping package dimension:

810-610-430mm

Gross weight: 23Kg

Net weight: 18Kg

FLAME PHOTOMETER

◆ FP640

Specifications

Flame Photometer

1. It is an analytical instrument.
2. the principle is that the emission spectrum decides the element.



1. The flame photometer is an instrument to measure the intensity of this light spectrum to determine the concentration of the measured element.

2. The flame photometer has the advantage of fast analysis and high sensitivity with little sample consumption. For these reasons, it has been extensively employed in such fields as clinical examination, fertilizer and soil analysis, as well as chemical industry.

3. The flame photometer itself cannot indicate directly the element concentration. First, prepare a standard solution, measure it, and record the results as the standard curve line. Then, measure the unknown solution, read the indication from the photometer, and find the corresponding intensity from the ready standard line.

4. With a simplified air pipeline system and digital-faced circuit, it is easier to operate and to read the result. FP-640 is also applicable to agricultural and industrial measurement of K and Na, and analysis of Li consumption by the psychological patients.

5. Major Technical Specifications

- a. Electricity supplier: photocell;
- b. Prismatic Measure: interfering filter;
- c. Indication: double-channel digital indication;
- d. Sensitivity: in clinical measurement,
K: 0.0-9.9mmol/L;
Na: 0-199mmol/L;
- e. Repeatability: $\leq 2\%$
- f. Linear Disparity: $\leq 5\%$ when K varies from 0.02 to 0.06mmol/L and Na varies from 1.00 to 1.80mmol/L.

6. Criteria for Normal Usage

- a. Temperature: 10~35;
- b. Prismatic Measure: $\leq 80\%$
- c. The instrument should be laid flat, and kept away from the sunlight, EMI or oscillation;
- d. Fire extinguisher should be equipped, and good ventilation is needed;
- e. Electric Power Voltage: $220 \pm 22V$; frequency: $50 \pm 0.5Hz$; It should be well grounded.

LABORATORY CABINETS

In daily experiments, we often carry out operations such as dumping, mixing, and compounding medicines, and these operations often produce some toxic and harmful gases, smoke, etc., which cause certain harm to the health of laboratory personnel, but as long as you have one all-steel fume hood with reasonable design and excellent performance can minimize or avoid the above-mentioned hazards. The fume hood is a device that can provide operators with a safer operating space and can efficiently discharge smoke and gas.

◆ Benchtop Laminar Flow Hood

In daily experiments, we often carry out operations such as dumping, mixing, and compounding medicines, and these operations often produce some toxic and harmful gases, smoke, etc., which cause certain harm to the health of laboratory personnel, but as long as you have one all-steel fume hood with reasonable design and excellent performance can minimize or avoid the above-mentioned hazards. The fume hood is a device that can provide operators with a safer operating space and can efficiently discharge smoke and gas.

Feature and Benefits

1. Vertical manifold, quasi-closed glass damper, easy to operate.
2. Small and exquisite, it can be placed on a general workbench at will, which is convenient for small studios.
3. The fan system is controlled by remote control switch fast and slow to ensure that the wind speed in the working area is always in an ideal state.

Technical Parameters

Parameter\Model	TPD-650	TPD-850
	TPHD-650	TPHD-850
Clean grade	Grade 100(209E U.S. Federal)	Grade 100(209E U.S. Federal)
Number of bacteria	≤ 0.5 per utensil/hour(90mm utensil)	≤ 0.5 per utensil/hour(90mm utensil)
Noise	≤ 62 dB	≤ 62 dB
Power supply	AC,220V/50Hz	AC,220V/50Hz
Average wind speed	0.25-0.45m/s	0.25-0.45m/s
Dimension of working area (W×D×H)	485*475*455mm	685*475*455mm
Overall dimension (W×D×H)	640*530*846mm	840*530*845mm
Specification and number of light from firefly/ ultraviolet light	8W*1/10W*1	8W*1/10W*1
Specification and number of high effective filter	480*460*38	680*460*38*1



TPHD series (Horizontal)



TPD series (Vertical)

◆ Biological safety cabinet (70% air exhaust class II) BSC-A2 Series

70% air exhaust class II biological safety cabinet is necessary in animalcule lab, especially in the condition needing protection measure, such as medicine, pharmacy, scientific research and so on.

Features and Benefits

1. 70% air exhaust class II biological safety cabinet accords with physical engineering principle, 10° inclination design, so the operating feel is more excellent.
2. Air insulation design to avoid cross pollution inside and outside air circulation ...30% Air Recirculation, 70% Air Exhaust, vertical laminar negative pressure.
3. Equipped with spring up/down movable door in the front and back of work bench, flexible and convenient to locate.
4. Equipped with special filter on ventilation to keep vented air conforming to national standard.
5. Contact switch adjusts voltage to keep wind speed in working area in ideal state all the time.
6. Operate with LED panel.
7. The material of the work area is 304 stainless steel.



Technical Parameters

Parameter / model		ZJSC-1000IIB2	ZJSC-1300IIB2	ZJSC-1600IIB2
Exhaust mode		100% Air Exhaust		
Cleaning level		100 Level(USA Federal Standard 209E)≥0.5um Granulae≤3.5per liter		
Number of colonies		≤0.5pcs/dish·hour (φ90mm culture plate)		
Average wind speed	Inside the door	0.38±0.025m/s		
	Middle	0.26±0.025m/s		
	Inside	0.27±0.025m/s		
Front suction air speed		0.55m/s±0.025m/s (70% Air Exhaust)		
Noise		≤62dB(A)		
Half ventilation peak value		≤3μm		
Power supply/Max. power consumption		AC220V/50HZ		
Maximum power consumption		800W	800W	800W
Biological safety		Personnel protection: impact type sampler: CFU≤10		
		Product protection: all sampling vessels: CFU≤5		
		Cross contamination protection: all double dishes: CFU≤2		
working area		1000*650*620	1300*650*620	1600*650*620
Overall dimension		1195*720*1950	1495*720*1950	1795*720*1950
Specification of air-supply filter		955*545*50*1	1280*554*50*1	1590*554*50*1
Specification and number of fluorescent lamp or UV lamp		20W*2/20W*1	30W*2/30W*1	30W*2/30W*1
Weight(kg)		150	200	250
Suit		Single	Double	Double

◆ Laboratory Cleanroom Air Shower FLB Series

Laboratory Cleanroom Air Shower is controlled by a microcomputer, LED digital display, automatic air shower, explosion-proof glass, with primary filter and 99.995% high-efficiency filter, which can effectively remove dust particles carried by people at high speed. We can also customize different sizes for customers.

Air shower series product is a kind of partial purifying equipment of strong universality. With novel structure, beautiful appearance, reliable running, low consumption, energy saving and convenient maintenance, it is widely used in electron, machinery, medicine, foodstuff, color packing, biological engineering and other industry and scientific research fields.



Technical Parameters

Model/Index Number	FLB-1B	FLB-1A	FLB-1C	FLB-1D
Numbler	Single-single	Single-double	Double-single	Single-single
Nozzle number	6	12	9	6
Diameter of nozzle	Diameter 30mm			
Caliber of nozzle	15-20m/s			
Efficiency of filter	Granularity is less than 0.5μm, dust must be 99.99%. (sodium flame)			
Size of air shower area (mm) W D H	700×760×1900	700×760×1900	700×1200×1900	750×760×1900
Size of air shower (mm) W D H	1050×760×2050	1300×760×2050	1050×1200×2050	1050×760×2050
Power	AC 3N 220V 50Hz			
Max. power (W)	550	1100	2200	550
Weight(kg)	200	250	500	200

◆ Laboratory Mobile Air Purifier ZJ series

Laboratory Mobile air purifier is a kind of air purifying equipment used for providing partial purifying environment. It is composed by primary-efficiency air filter, fan, high-efficiency air filter and box body. The outer case is made from cold-rolled steel plate and the surface is finished with varnish. It is simple in structure and convenient to use. It may start indoor air circulation after installed. So it is suitable for the condition when cleanness is 10000~100000 level and working place has to be changed frequently. It has been widely used in small areas, such as sterile room, laboratory, pure water and filled water plant, drinks plant, milk product plant, food plant and wine plant. It is an ideal equipment for food plant passing QS authentication.

Features and Benefits

1. The outer case of air self-purifying unit is made from cold-rolled steel plate and varnish.
2. It is equipped with primary-efficiency filter screen, air supply static pressure box, high-efficiency filter and flow plate, as well as is equipped with wind-speed regulation device so that wind speed is regulated according to actual condition.
3. The purifying level on outlet may be up to thousand level and that on bench may be up to ten thousand level.
4. It is equipped with mobile paddle wheel and adjustable jack on the bottom of this air purifying unit. It may be moved to needed place and fixed there, so it is convenient and flexible to operate.
5. It adopts variable wind speed fan system and multi-shift timing system to keep wind speed in partial working area in ideal state all the time.



Technical Parameters

Model	PAU-1000 mobile air self-purifier		
Filtration efficiency	≥99.97% @ ≥0.5μm	Power	350W
The average wind speed	1.2~2 m/s±20%	Efficient specifications	760*610*38mm
Rated air volume	1000sq. m./h averages	Appearance size	845*500*1245mm
Power supply	AC220V/50Hz	Noise	≤62dB (A)

LIQUID NITROGEN TANK

◆ YDS Series

The Liquid Nitrogen Tank is widely used in active preservation of animal semen, active preservation of biological samples, cryogenic treatment of metal materials, cryogenic assembly of precision parts, refrigeration in medical and health industry, refrigeration in medical surgery, beauty and so on. Different volumes are available.



FULL AUTOMATIC KJELDAHL DISTILLATION ANALYZER

◆ ZDDN-II-A

Kjeldahl method is a classical method for the determination of nitrogen. At present, Kjeldahl method is widely used to determine soil, food, animal husbandry, agricultural products, feed and other nitrogen-containing compounds. This method needs three processes: sample digestion, distillation separation and titration analysis.

ZDDN-II-A Automatic Kjeldahl nitrogen determinator is a "nitrogen element" (protein) analysis system for determining the end point by automatic distillation titration technology and color method developed according to the classical Kjeldahl nitrogen determination method.



Features and Benefits

1. 7-inch color touch screen, easy to operate
2. Automatic shutdown function. The system will be shut down automatically without operation for 60 minutes. It is energy-saving, safe and assured. The operation methods, reagent preparation, precautions and maintenance are placed on the screen for users to query and use
3. R, G and B color sensors are selected, with wide color adaptation range, high precision and fast response speed
4. The three titration curves of R, G and B can observe the sample changes in the titration process and provide help for the analysis process
5. Titration accuracy verification can ensure the accuracy of analytical data
6. The titration cup is installed on the surface, which is convenient for users to observe the titration process and clean the titration cup
7. The "plunger titration pump" is composed of German linear motor and syringe, which has high control precision and good stability
8. The built-in protein coefficient query table of the instrument is convenient for users to consult, query and participate in system calculation
9. 16m data storage capacity can store 100000 sample data for reference, and 5.7cm automatic paper cutting thermal printer
10. 99 groups of user-defined program (formula) management system
11. The multi-functional interface can be connected to the refrigeration system and reagent tank liquid level sensor
12. Nitro samples can be measured by time delay analysis
13. Metal (304 stainless steel) steam cooker; stable, reliable and strong compression resistance
14. The steam system provides constant pressure and steam flow, with good stability and safety
15. Professional pumps and valves with excellent performance and imported pipeline system fully ensure the reliability and stability of products

Technical Parameters

Analysis range	0.1-240 mg N	Communication interface	232 / network / cooling water / reagent level
Precision (RSD)	≤ 0.5%	Delay analysis	reaction time 0-2 hours
Recovery (indication error)	≥ 99.5% (± 0.5%)	Safe alkali dosing mode	0-999 seconds
Titration accuracy	0.75 μL / step	Automatic shutdown time	60 minutes
Sample analysis time	4-6min / (cooling water temperature: 18 °C)	Working voltage	AC220V / 50Hz
Concentration range of titrant	0.01-5 mol / L	Heating power	2000W
Input method of titrant concentration	manual input	Overall dimension	500 * 460 * 710mm
Data storage capacity	100000 groups of data	Net weight	36kg
Printer	5.7cm thermal automatic paper cutting printer		

Optional accessories

Test tube rack - reagent tank liquid level sensor

◆ Full Automatic Kjeldahl Distillation Analyzer ZDDN-III-A/B

Kjeldahl method is a classical method for the determination of nitrogen. At present, Kjeldahl method is widely used to determine soil, food, animal husbandry, agricultural products, feed and other nitrogen-containing compounds. This method needs three processes: sample digestion, distillation separation and titration analysis.

ZDDN-III-A/B Automatic Kjeldahl nitrogen determinator is a "nitrogen element" (protein) analysis system for determining the end point by automatic distillation titration technology and color method developed according to the classical Kjeldahl nitrogen determination method.

Features and Benefits

1. The embedded operating system with independent intellectual property rights adopts 10 inch color touch screen, and the menu is Chinese man-machine dialogue, which is simple to operate and easy to learn.
2. Automatic shutdown function. The system will be shut down automatically without operation for 60 minutes. It is energy-saving, safe and assured. The operation methods, reagent preparation, precautions and maintenance are placed on the screen for users to query and use.
3. The three titration curves R, G and B can observe the sample changes in the titration process and provide help for the analysis process.
4. Titration accuracy verification can ensure the accuracy of analytical data.
5. The titration cup is installed on the surface, which is convenient for users to observe the titration process and clean the titration cup.
6. The built-in protein coefficient query table of the instrument is convenient for users to consult, query and participate in system calculation.
7. Automatically upload and input the sample weighing data to reduce the tedious work and input errors of manual input one by one.
8. 16m data storage capacity can store 100000 sample data for users to consult, and 5.7cm automatic paper cutting thermal printer.
9. 99 groups of user-defined program (formula) management system.
10. The stored data can be exported through the local USB interface for users to save on the computer, edit and use.
11. The computing operating system based on windows and screen synchronization is easy to learn and use (jk9670b).
12. The multi-functional interface can be connected to the refrigeration system and reagent tank liquid level sensor.
13. The full-automatic Kjeldahl nitrogen determinator without tap water is equipped with high-efficiency cold water circulation system, which is controlled by the host of the nitrogen determinator, with energy saving, environmental protection and good stability.
14. The internal standard of titrant concentration eliminates the systematic error between human and instrument judgment, with high precision and convenience.
15. Automatic shutdown function. The system will shut down automatically without operation for 60 minutes, which is energy-saving, safe and assured.
16. The sample weighing data is automatically uploaded and input to reduce the tedious work and input errors of manual input one by one.
17. Distillation while titration mode, distillation and titration are carried out at the same time. When the titration reaches the end point, the distillation is completed at the same time, which can save the analysis time.
18. Automatic discharge of digestive waste liquid to reduce the labor intensity of workers.
19. 50% - 100% of steam flow can be adjusted arbitrarily to apply to samples with different concentrations.
20. The steam system provides constant pressure and steam flow, with good stability and safety.
21. Shut down and automatically clean the alkali pipeline to prevent the alkali pipeline from blocking and ensure the accuracy of liquid supply.
22. Cooling water flow monitoring can prevent sample loss caused by insufficient cooling water flow and affect the analysis results.
23. Nitro samples can be measured by time delay analysis.



Technical Parameters

Analysis range	0.1-210 mg/n	Communication interface	232 / network / cooling water / reagent level
Precision (RSD)	≤ 0.5%	Digester waste discharge mode	manual / automatic discharge (5-99s)
Recovery (or indication error)	≥ 99.5% (± 0.5%)	Delay analysis	reaction time 0-2 hours
Titration accuracy	0.75 μL / step	Steam flow regulation	50% - 100%
Sample analysis time	4-6min / (cooling water temperature: 18 ℃)	Safe alkali dosing mode	0-99 seconds
Concentration range of titrant	0.01-5 mol / L	Automatic shutdown time	60 minutes
Input method of titrant concentration	manual input / instrument internal standard	Working voltage	AC220V / 50Hz
Titration mode	Standard / drip while steaming	Heating power	2000W
Touch screen	10 inch color LCD touch screen	Overall dimension	500 * 450 * 710mm
Data storage capacity	100000 groups of data	Net weight	36kg
Printer	5.7cm thermal automatic paper cutting printer		

◆ Full Automatic Kjeldahl Distillation Analyzer (With automatic sampler) ZDDN-III-PC

ZDDN-III-PC Series Automatic Kjeldahl nitrogen analyzer is a fully automatic distillation titration technology and color method to determine the end point of "nitrogen element" (protein) analysis system developed based on the classical Kjeldahl nitrogen determination method.

Features and Benefits

1. The embedded operating system with independent intellectual property rights adopts 10 inch color touch screen, and the menu is Chinese man-machine dialogue, which is simple to operate and easy to learn.
2. Automatic shutdown function, the system automatically shuts down without operation for 60 minutes, which is energy-saving, safe and assured.
3. The operation method, reagent preparation, precautions and maintenance are placed on the screen for user's query and use.
4. The three titration curves of R, G and B can observe the sample changes in the titration process and provide help for the analysis process.
5. Titration accuracy verification can ensure the accuracy of analytical data.
6. The titration cup is installed on the surface, which is convenient for users to observe the titration process and clean the titration cup.
7. The built-in protein coefficient query table of the instrument is convenient for users to consult, query and participate in system calculation.
8. The sample weighing data is automatically uploaded and input to reduce the tedious work and input errors of manual input one by one.
9. The 16m data storage capacity can store 100000 sample data for users to consult, and the 5.7cm automatic paper cutting thermal printer.
10. 99 groups of user-defined program (formula) management system.
11. The stored data can be exported through the local USB interface for users to save on the computer, edit and use.
12. The computing operating system based on windows and screen synchronization is easy to learn and use.
13. The multi-functional interface can be connected to the refrigeration system and reagent tank liquid level sensor.
14. With 40 position autosampler.
15. The full-automatic Kjeldahl nitrogen determiner without tap water is equipped with high-efficiency cold water circulation system, which is controlled by the host of the nitrogen determiner, with energy saving, environmental protection and good stability.
16. The internal standard of titrant concentration eliminates the systematic error between human and instrument judgment, with high precision and convenience.
17. Automatic shutdown function. The system will shut down automatically without operation for 60 minutes, which is energy-saving, safe and assured.
18. The sample weighing data is automatically uploaded and input to reduce the tedious work and input errors of manual input one by one.
19. Distillation and titration mode distillation and titration are carried out at the same time. When the titration reaches the end point, the distillation ends at the same time, which can save the analysis time.
20. Automatic discharge of digestive waste liquid to reduce the labor intensity of workers.
21. 50% - 100% of steam flow can be adjusted arbitrarily to apply to samples with different concentrations.
22. The steam system provides constant pressure and steam flow, with good stability and safety.
23. Shut down and automatically clean the alkali pipeline to prevent the alkali pipeline from blocking and ensure the accuracy of liquid supply.
24. Cooling water flow monitoring can prevent sample loss caused by insufficient cooling water flow and affect the analysis results.
25. Nitro samples can be measured by time delay analysis.



Technical Parameters

Analysis range	0.1-240 mg N	Printer	5.7cm thermal automatic paper cutting printer
Precision (RSD)	≤0.5%	Communication interface	232 / network / cooling water / reagent level
Recovery (or indication error)	≥99.5% (±0.5%)	Digester waste discharge mode	manual / automatic discharge (5-99s)
Titration accuracy	0.75 μL / step	Delay analysis	reaction time 0-2 hours
Sample analysis time	4-6min / (cooling water temperature: 18 ℃)	Steam flow regulation	50% - 100%
Concentration range of titrant	0.01-5 mol / L	Safe alkali dosing mode	0-89 seconds
Input method of titrant concentration	manual input / instrument internal standard	Automatic shutdown time	60 minutes
Titration mode	Standard / drip while steaming	Working voltage	AC220V / 50Hz
Touch screen	10 inch color LCD touch screen		2000W
Data storage capacity	100000 groups of data		
One set of 40 position automatic sampler		A set of desktop computers	

◆ Constant temperature digestion furnace KDN-8D

Digestion furnace is a sample digestion and conversion equipment developed based on the classical wet digestion principle. It is mainly used for digestion before chemical analysis of plant, seed, feed, soil, ore and other samples in agriculture, forestry, environmental protection, geology, petroleum, chemical industry, food and other departments, colleges and universities and scientific research departments.

Product features

1. This series of products redesign and improve the heating system, greatly improve the temperature uniformity between holes after improvement, and have good sample digestion
2. The surface of aluminum alloy heating module adopts aviation industry coating technology, which is beautiful and durable, and the design temperature is 450 °C
3. Liquid crystal display temperature controller is adopted, which has the functions of regular shutdown and alarm, PID intelligent control technology, high temperature control precision, small temperature impulse amplitude and easy to learn
4. The instrument table and test tube rack are welded with brushed stainless steel plate, with certain anti-corrosion ability

Parameters

Number of sample holes	8	Heating rate	≈ 8—15 °C / min
Aperture	Φ 43.5mm	Temperature control instrument	LCD screen
Heating module material	6061 aluminum alloy gold	Timed shutdown	1-999 minutes
Design temperature	450 °C	Working voltage	AC220V/50Hz
Temperature control accuracy	± 1 °C	Heating power	2.2kw



◆ Curve electric heating plate TRB-L

Application

Electric heating plate is widely used in experiments and laboratories such as grain, agriculture, soil, environmental protection, food, scientific research institutes, colleges and universities. It can be used for sample heating, drying, digestion, acid driving, etc.

Product features

1. The heating body is 6061 aluminum alloy. The surface is treated by coating process. The design temperature is up to 350 °C, with good thermal conductivity, uniform temperature, large effective heating area and fast temperature rise
2. Strong ventilation and cooling design in the temperature control area to ensure the long-term stable and reliable operation of the equipment
3. It is equipped with overtemperature protection sensor on the surface of furnace body to prevent accidents
4. The table is made of 304 stainless steel and sprayed with Teflon, which is corrosion-resistant and beautiful
5. The temperature control system adopts 5-inch color touch screen, Chinese and English conversion, and the operation is simple
6. The formula program input adopts the table format fast input method, with clear logic, fast speed and not easy to make mistakes
7. The 0-40 segment program can be selected and set arbitrarily
8. Single point heating and curve heating are optional
9. Intelligent P, I and D self-tuning temperature control has high precision, reliability and stability
10. The electrical control system adopts solid-state relay with strong mute and anti-interference ability
11. Sectional power supply and power failure prevention recovery and restart function can avoid potential risks

Technical Parameters

Model	TRB-300L	TRB-400L	TRB-600L
Plate size	300*200	400*300	600*400
Plate material	Aluminum alloy coating		
Design temperature	RT-350°C		
Accuracy	±1°C		
Temperature control system	5.5-inch color touch screen, Chinese English conversion, 1-40 curve (program) heating / single point heating dual mode		
Recipe management	Group 9		
Timed shutdown	1-999 minutes setting		
Voltage	AC220V/50Hz		
Heating power	1500W	3000W	4000W



CURVE ELECTRIC HEATING PLATE

◆ TRB-S

Electric heating plate is widely used in experiments and laboratories such as grain, agriculture, soil, environmental protection, food, scientific research institutes, colleges and universities. It can be used for sample heating, drying, digestion, acid driving, etc.

Features and Benefits

1. The heating body is high-density graphite, and the design temperature is up to 550 °C. The graphite plate surface has the characteristics of uniform temperature and small temperature impulse.
2. Strong ventilation and cooling design in the temperature control area to ensure the long-term stable and reliable operation of the equipment.
3. It is equipped with overtemperature protection sensor on the surface of furnace body to prevent accidents.
4. The table is made of 304 stainless steel and sprayed with Teflon, which is corrosion-resistant and beautiful.
5. The temperature control system adopts 5-inch color touch screen, Chinese and English conversion, and the operation is simple.
6. The formula program input adopts the table format fast input method, with clear logic, fast speed and not easy to make mistakes.
7. The 0-40 segment program can be selected and set arbitrarily.
8. Single point heating and curve heating are optional.
9. Intelligent P, I and D self-tuning temperature control has high precision, reliability and stability.
10. The electrical control system adopts solid-state relay with strong mute and anti-interference ability.
11. Sectional power supply and power failure prevention recovery and restart function can avoid potential risks.

Parameters

Plate size	400 * 300	Recipe management	9 groups
Plate material	Graphite	Timed shutdown	1-999 minutes, any setting
Design temperature	rt-550 °C	Voltage	AC220V / 50Hz
Accuracy	±1 °C	Heating power	3000W
Temperature control system	5.5-inch color touch screen, Chinese English conversion, 1-40 curve (program) heating / single point heating dual mode		



WASTE GAS COLLECTOR

◆ TRSJ Series

Application

The collection device is an acid gas collection device specially equipped for the digestion furnace. It can collect a large amount of acid gas (acid mist) generated during sample digestion through the collection device and then process it through the neutralization device. The treated acid gas (acid mist) can be discharged up to the standard.

Product features

1. The sealing cover is made of fluorine glue (FPM) material and pressed by mold, which is resistant to high temperature and strong acid and alkali.
2. The collecting pipe goes deep into the pipe to collect acid gas, with high reliability.
3. The shell is welded with 316 stainless steel plate, which has good anti-corrosion performance.
4. Complete specifications are convenient for users to choose.



Model	TRSJ-20	TRSJ-15	TRSJ-10	TRSJ-8
Collection port	20	15	10	8
Exhaust port	2	2	1	1

ACID BASE NEUTRALIZATION DEVICE

◆ TH-1B

Application

A large amount of acid mist will be produced during sample digestion, which will cause serious pollution to the environment and damage facilities. The device is the best instrument for collecting, neutralizing and filtering acid mist. It is composed of two-stage filters. The first stage completes the neutralization and filtration of acid mist by alkali solution of corresponding concentration and enters the second stage. The second stage uses distilled water to continue filtering the residual waste gas entering the first stage, and the gas filtered at this stage can be discharged up to the standard. The gas after neutralization and filtration is neutral gas, which will not cause harm to the environment and facilities, and finally realize pollution-free emission.



Product features

1. This product is an acid and alkali neutralization equipment with its own negative pressure air pump. The air pump has the advantages of large flow, long service life and convenient use
2. The secondary absorption procedure of alkali liquor and distilled water ensures the high purity of the discharged gas
3. Large gas-liquid contact surface, high neutralization efficiency and no pollution of discharged gas
4. The instrument is simple, safe and reliable
5. Neutralization Solution replacement is convenient and easy to operate

Parameters

Air inlet	Air inlet	Alkali concentration	Alkali concentration
Extraction flow	Extraction flow	Working voltage	Working voltage
Alkali solution bottle	Alkali solution bottle	Power	Power
Distilled water bottle	Distilled water bottle	Net weight	Net weight

WATER BATH NITROGEN BLOWER

◆ TP-WD-12/24

Product introduction

The water bath nitrogen blower adopts internationally recognized technology, uses purge and capture technology, and can control the temperature and heat the sample. The sample solution can be quickly and continuously blown to the sample surface by nitrogen and other inert gases to achieve rapid oxygen free concentration. This method is time-saving, convenient and accurate. It is widely used in food safety, medicine, pesticide residue detection, clinical pharmacokinetics and other fields.



Characteristic

1. It is applicable to containers of different specifications such as test tubes, conical bottles and centrifugal tubes.
2. Number of samples: 12, The sample rack of the spring test tube clamp is fixed and positioned, and each sample has a digital number.
3. The position of the test tube is fixed by the test tube clamp and support plate with spring, and the height direction can be adjusted arbitrarily.
4. For the free lifting needle valve tube, each air duct can be raised and lowered to an appropriate height independently according to the size of the test tube and the amount of solvent. At the same time, the adjustable needle valve tube can control the gas flow.
5. The round structure can rotate freely, which is convenient for the sample support to enter and exit the water bath and easy to operate.
6. Intelligent digital temperature controller with timing, double digital display, PID Technology for adjustment, over temperature alarm and dry burning prevention.

Model	TP-WD-12	TP-WD-12
Number of samples processed	12 independent controls	12 independent controls
Heating mode	water bath	
Test tube range	10~55mm	10~29mm
Sample tray lifting height	0~150mm	
Sample tray rotation space	360°C	
Accuracy	±1°C	
Temperature range	RT - 100 °C	
Temperature control mode	4-digit display / PID regulation / overtemperature alarm	
Timing	0~99h59min	
Gas flow	Controllable 0-15l / min	
Nitrogen consumption	330ml / min / sample	
Power	1000W	