

# LAB Catalog

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For More Information, or to Order, Call Representative:**

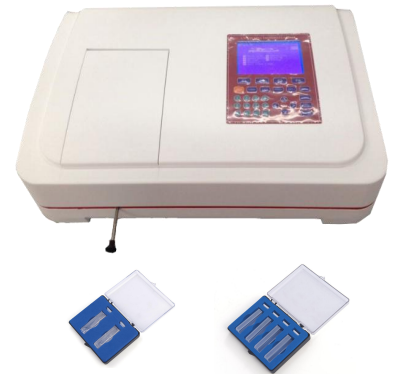
# AE-S90/S80 Series UV VIS Spectrophotometer

ISO/CE Pass

## Key Features:

- \* Double/Single beam spectrophotometer with highly stable optics.
- \* Extremely versatile with full functionality from 190 to 1100nm.
- \* Variable spectral bandwidth 0.5, 1, 2, 4,5nm.
- \* 2 or 8 cell holder available.
- \* 6 inches LCD display & integrated user interface.
- \* USB port for data storage.
- \* ISO/CE Certificate passed.

AE-S80 Series



- \* A & E Lab PC software included as standard.
- \* Extensive range of accessories available.

## Applications:

AE-S90/AE-S80 Series are wide screen double beam spectrophotometer. Its integrated design assures long term stability and durability. The highly stable optics and one or two detectors measure the sample and reference simultaneously optimising measurement accuracy. It has measurement modes for photometrics, concentration, multi-wavelength, spectrum scanning, kinetics, quantitation, DNA and protein analysis. The PC software is supplied as standard and offers additional functionality with preloaded methods for DNA and protein analysis, as well as extensive post-measurement tools, unlimited results saving and easy export of data.

The precisely aligned detector and quality deuterium and halogen lamps enhance the precision across the uv/vis spectrum starting from 190nm and into the near-infrared 1100nm. It is ideal for quality control, general research, pharmaceutical, biochemical and clinical laboratory applications.

## Ordering Information:

| Order Code | Description  |
|------------|--|
| AE-S90-MD  | Large screen, double beam, 2 single cell holder, Bandwidth: 0.5/1.0/2.0/4.0/5.0nm, with PC software. |
| AE-S90-1D  | Large screen, double beam, 2 single cell holder, Bandwidth: 1nm, with PC software.                   |
| AE-S90-2D  | Large screen, double beam, 2 single cell holder, Bandwidth: 1.8nm, with PC software.                 |
| AE-S80-MS  | Large screen, single beam, 4 cell holder, Bandwidth: 0.5/1.0/2.0/4.0/5.0nm, with PC software.        |
| AE-S80-1S  | Large screen, single beam, 4 cell holder, Bandwidth: 1nm, with PC software.                          |
| AE-S80-2S  | Large screen, single beam, 4 cell holder, Bandwidth: 1.8nm, with PC software.                        |

## Technical Specifications:

| Wavelength                  |  | Photometric               |                         |
|-----------------------------|--|---------------------------|-------------------------|
| Wavelength Range            | 190-1100nm   | Accuracy                  | ±0.3%T                  |
| Wavelength Accuracy         | ±0.3nm   | Photometric Repeatability | 0.2%T                   |
| Wavelength Repeatability    | 0.2nm  | Photometric Display Range | -0.3-3A,0-200%T,0-9999C |
| Bandwidth                   | 1nm/1.8nm/0.5,1,2,4,5nm  | Stability                 | ± 0.001A/h @ 500nm      |
| Others                      |  | Baseline Flatness         | ±0.001A                 |
| Data Output Port            | USB  | Noise                     | ±0.001A                 |
| Printer Port                | Parallel Port  | Stray Light               | ≤0.05%T @220nm, 360nm   |
| Optical System              | Double Beam (1200 lines/mm grating)                                |                           |                         |
| Display                     | LCD (320x240 Dots )  |                           |                         |
| Lamps                       | Deuterium & Tungsten Halogen Lamp                                  |                           |                         |
| Detector                    | Silicon Photodiode   |                           |                         |
| Software                    | UV PC Software   |                           |                         |
| Power Supply                | AC 220V/50Hz, 110V/60Hz.   |                           |                         |
| Packing Size & Gross Weight | 860x660x465mm & 35kg<br>860x660x465mm & 37kg (AE-S90-MD/AE-S80-MS) |                           |                         |

## Colorful Touch UV-VIS Spectrophotometer

### Features and Functions:

1. 800x480 touch screen display which shows clear graphs;
2. Stand-alone system which can realize spectrum measurement, quantitative, wavelength scanning, kinetics, system setting directly on the instrument.
3. The instrument uses a rigid 8mm die-case aluminum base as its optical mount to ensure instrument stability and reliability.
4. Automatic system calibration and positioning to recover deviation after long-time use.
5. Imported main optical spare parts to ensure low stray light, stability and reliability.
6. With powerful memory, can print data and graphs in A4 format directly by connecting to a printer.
7. Data can export to USB directly.



### Advantages:

- # Intelligent alarm function.
- # Display several groups of data at the same time for direct reading.
- # New panel with touch screen.
- # System encryption function.
- # Module design for easy operation.

### Ordering Information:

| Order Code | Description   |
|------------|---|
| AE-S80-TS  | Touch Screen, Single beam UV-VIS Spectrophotometer, wavelength range 190-1100nm, bandwidth: 2nm. Without PC Software, the data can transfer from USB interface or connect to computer print it. |
| AE-S90-TD  | Touch Screen, Double beam UV-VIS Spectrophotometer, wavelength range 190-1100nm, bandwidth: 2nm. Without PC Software, the data can transfer from USB interface or connect to computer print it. |

### Key Technical Specifications:

| Wavelength                  |   | Photometric               |                             |
|-----------------------------|---|---------------------------|-----------------------------|
| Wavelength                  | 190-1100nm  | Photometric range         | 0-200%T, -0.4~4.0A, 0-9999C |
| Wavelength accuracy         | ±0.5nm  | Photometric accuracy      | ±0.2%T (0-100%T)            |
| Wavelength repeatability    | ≤0.2nm  |                           | ±0.002Abs (0-0.5Abs)        |
| Bandwidth                   | 2nm   |                           | ±0.004Abs (0.5-1.0Abs)      |
| Others                      |   | Photometric repeatability | ≤0.15%T (0-100%T)           |
| Data output port            | USB   |                           | 0.001Abs (0-0.5Abs)         |
| Printer port                | USB port  |                           | 0.002Abs (0.5-1.0Abs)       |
| Display                     | 800x480 touch screen  | Stability                 | ±0.001A/h (@500nm)          |
| Lamps                       | Imported D2 lamp & W lamp   | Baseline Flatness         | ±0.001A                     |
| Detector                    | Silicon photodiode  | Noise                     | ±0.0005A                    |
| Power requirements          | AC220V/50Hz or 110V/60Hz  | Stray light               | ≤0.05%T@220nm, 360nm        |
| Packing Size & Gross weight | 860x660x465mm & 37kg(AE-90-TD)/<br>860x660x465mm & 36kg (AE-S80-TS) |                           |                             |

# AE-S70/S60 Series UV-VIS/VIS Spectrophotometer

ISO/CE Pass

## Key Features:

- \* Single beam spectrophotometer with highly stable optics.
- \* Extremely versatile with full functionality  
UV range: 190 to 1100nm, VIS range:320-1100nm.
- \* Spectral bandwidth 1.8 & 2nm.
- \* 6 inches/2.5 inches & compact LCD display.  
Integrated user interface.
- \* USB port for data storage.
- \* A & E Lab PC software available.



AE-S60 Series



\* Extensive range of accessories available.

## Application:

AE-S70/S60 Series spectrophotometers have the most attractive cost performance. It is widely used in colleges and enterprises for general quantitative analysis and experiments.

- \* The instrument use a lead screw structure so that the instrument wavelength accuracy and wavelength resolution can be greatly improved.
- \* 8mm thick optical base: the instrument use a rigid die-cost aluminum base as its optical mount to ensure instrument stability and reliability.
- \* It can set up various standard curves according to customer/s solutions and find the concentration of unknown solutions.

## Functions:

- ❖ T Mode: Continuously measure the Transmittance of samples
- ❖ A Mode: Continuously measure the Absorbance of samples
- ❖ C Mode: Standard Curve method, can use at most 9 standard samples to create a new standard curve, and to measure the unknown samples by the new one.
- ❖ F Mode: Coefficient Method, Input the known K and C to measure the unknown concentration samples.

## Ordering Information:

| Order Code                              | Description   |
|---|---|
| AE-S70-1U                               | 6 inch display, single beam, 4 cell holder, 190-1100nm, Bandwith: 1.8nm.                                    |
| AE-S70-2U                               | 2.5 inch display, single beam, 4 cell holder, 190-1100nm, Bandwith: 2nm.                                    |
| AE-S60-2U                               | 2.5 inch display, single beam, 4 cell holder, 190-1000nm, Bandwith: 2nm                                     |
| AE-S60-4U                               | 2.5 inch display, single beam, 4 cell holder, 200-1000nm, Bandwith: 4nm.                                    |
| AE-S70 Series Visible Spectrophotometer |   |
| AE-S70-2V                               | 2.5 inch display, single beam, 4 cell holder, 320-1100nm, Bandwith: 2nm, wavelength accuracy: $\pm 0.5$ nm. |
| AE-S60-4V                               | 2.5 inch display, single beam, 4 cell holder, 325-1000nm, Bandwith: 4nm.                                    |

## Technical Specifications:

| Wavelength                  |  | Photometric               |                                       |
|-----------------------------|--|---------------------------|---------------------------------------|
| Wavelength Accuracy         | AE-S70: $\pm 0.5$ nm                   | Photometric Accuracy      | S70: $\pm 0.3\%$ T/S60: $\pm 0.5\%$ T |
| Wavelength Accuracy         | AE-S60: $\pm 1$ nm                     | Photometric Repeatability | S70: 0.2%T/S60:0.3%T                  |
| Wavelength Repeatability    | S70: $\pm 0.2$ nm/S60: $\pm 0.5$ nm    | Photometric Display Range | 0-200%T, -0.3-3.0A, 0-9999C           |
| Band Width                  | 1.8nm/2nm/4nm                          | Stability                 | 0.002A/h @ 500nm                      |
| Others                      |  | Baseline Flatness         | $\pm 0.002$ A/ $\pm 0.0015$ A         |
| Data Output Port            | USB                                    | Noise                     | $\pm 0.001$ A                         |
| Printer Port                | Parallel Port                          | Stray Light               | $\leq 0.05\%$ T @ 220nm, 360nm        |
| Optical System              | Single Beam (1200 lines/mm grating)    |                           |                                       |
| Display                     | LCD (320x240/128x64 Dots )             |                           |                                       |
| Detector                    | Silicon Photodiode                     |                           |                                       |
| Lamps                       | Deuterium & Tungsten Halogen Lamp      |                           |                                       |
| Power Supply                | AC 220V/50Hz, 110V/60Hz.               |                           |                                       |
| Packing Size & Gross Weight | 70x61x44cm & 25kg<br>57x45x31cm & 13kg |                           |                                       |

# AE-S50 Series

ISO/CE Pass

## Visible Spectrophotometer

### Key Features:

- \* Visible spectrophotometer with highly stable optics.
- \* Extremely versatile with full functionality from 325 to 1000nm.
- \* Spectral bandwidth 4nm. Integrated user interface.
- \* USB port for data storage.
- \* Extensive range of accessories available.



### AE-S50-4V Features:

- \* With microprocessor controlled, it can realize auto zero and auto 100% adjustment with one push-button.
- \* 1200 line grating which ensures high resolution, low stray light and high parameters accuracy.
- \* Equipped with USB port which can be connected to PC and edit data via software. Data can print while connect with a micro-printer.
- \* Four display mode: Absorption, transmittance, concentration and coefficient directly by different mode switching.
- \* Compact design, easy to carry.

### AE-S50-4V TOUCH Features:

1. The holographic blazed grating monochromator has the advantages of high wavelength accuracy, good monochromaticity and low stray light.
2. 7-inch multi color touch-screen, good human-computer interface.
3. Linear regression method and coefficient method are added to the concentration test method.
4. USB interface is added, and large capacity memory can store 30 concentration curves.
5. Adopt microcomputer measurement system, with high conversion accuracy of T-A, automatic adjustment of 0% T and 100% T, concentration factor setting and concentration direct reading.
6. High accuracy, Good Reproducibility and Stability of Measurement Readings.
7. Automatic light gate technology, No need blackbody, to protect the photoelectric sensor.

### Ordering Information:

| Order Code      | Description   |
|-----------------|---|
| AE-S50-4V       | LCD Display, Single Beam, Visible Spectrophotometer, 325-1000nm, Bandwidth: 4nm.          |
| AE-S50-4V TOUCH | Touch Screen Display, Single Beam, Visible Spectrophotometer, 325-1000nm, Bandwidth: 2nm. |

### Technical Specifications:

| Wavelength                  |            | Photometric                                |                                   |
|-----------------------------|------------|--|-----------------------------------|
| Wavelength Range            | 325-1000nm | Photometric Accuracy                       | ±0.5%T                            |
| Band Width                  | 4nm/2nm    | Photometric Repeatability                  | 0.3%T/0.2%T                       |
| Wavelength Accuracy         | ±2nm       | Photometric Display Range                  | T. A. C. F                        |
| Wavelength Repeatability    | 1nm        | Stability                                  | 0.002A/h @ 500nm                  |
| Data Output Port            | USB        | Stray Light                                | ≤0.3%T@220nm, Touch ≤0.1%T, 360nm |
| Printer Port                |            | Parallel Port                              |                                   |
| Display                     |            | LCD Display/Touch Screen                   |                                   |
| Lamp                        |            | Tungsten Halogen Lamp                      |                                   |
| Detector                    |            | Silicon Photodiode                         |                                   |
| Software                    |            | VIS software (Optional)                    |                                   |
| Packing Size & Gross Weight |            | 570×450×330mm & 9kg, 580×460×345mm, 12.5kg |                                   |

# UV Vis Spectrophotometer

ISO/CE

(Micro-volume)

## Introduction:

### 1. User-friendly software, easy to use

It is easy to use, free software updates are available

### 2. Micro-volumes measuring

Only require 0.5~2 $\mu$ l sample to accurately determine nucleic acids, proteins

### 3. Fast and easy measurements

Turn on and instantly measure without lamp warm up time; Easy measurement within 8 sec

### 4. Long life's Xenon flash lamp

Xenon flash lamp, 10 flashes, up to 10 years, no cells or cuvettes, no dilutions and expensive consumables

### 5. No consumables required

Direct microvolume measurements from 1–2 $\mu$ L of sample. Eliminates the need for expensive accessories

### 6. No computer required and with touch screen (only Nano-300)

Nano-300 is equipped with Android system operation

### 7. The Nano-100 / Nano-300 are full range of wavelength (200-800nm) detection ability;



AE-NANO100



AE-NANO300/400A/500

## Features:AE-NANO100

1. Turn on and instantly measure without lamp warm up time; Full scan capability from 200-800nm within 5 sec
2. Detects Nucleic Acids up to 4500ng/ $\mu$ l (dsDNA)
3. 3864-Element linear silicon CCD array

## Features:AE-NANO300

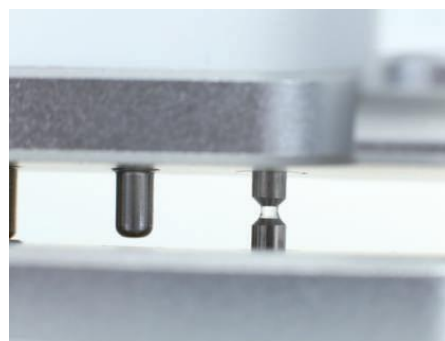
1. Nano-300 is an improved Micro-Spectrophotometer based on Nano-100 with 200-800nm. It is added a function of bacterium cell concentration detection (OD600)
2. Android system operation, 7 inch touch screen no computer, APP soft, simple interface, easy to use
3. Turn on and instantly measure without lamp warm up time; Full scan capability from 200-800nm within 6 sec.
4. The data can be printed with built-in printer, and can output via SD-RAM Card and USB memory
5. When the Nano-300 is idly left more than 5mins, it will switch off automatically. Then, the user can awake the machine by touching the screen



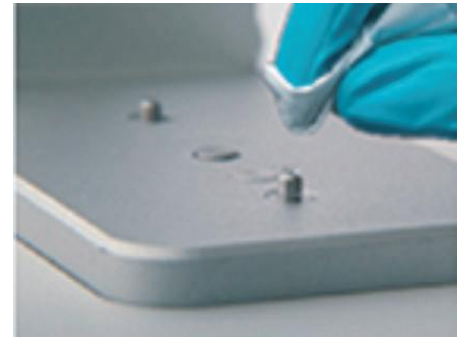
## Easy Handling:



Adding Sample



Test Sample



Quick and Easy Clean



## Technical Specifications:

| Model                    | AE-NANO100               | AE-NANO300            | AE-NANO400A           | AE-NANO500               |
|--------------------------|--------------------------|-----------------------|-----------------------|--------------------------|
| Wavelength Range         | 200-800nm                | 200-800nm             | 260nm, 280nm          | 200-800nm                |
| Minimum Sample Size      | 0.5-2.0uL                | 0.5-2.0uL             | 1-2.0uL               | 0.5-2.0uL                |
| Path Length              | 0.2mm<br>1.0mm           | 0.2mm<br>1.0mm        | 0.5mm                 | 0.05mm<br>0.3mm<br>1.0mm |
| Light Source             | Xenon flash lamp         | Xenon flash lamp      | UVLED                 | Xenon flash lamp         |
| Detector Type            | 3864-Linear CCD array    | 2048-Linear CCD array | UV-sillion photocell  | 2048-Linear CCD array    |
| Wavelength Accuracy      | 1nm                      | 1nm                   | —                     | 1nm                      |
| Spectral Resolution      | ≅ 3nm (FWHM at Hg546 nm) |                       | —                     | ≅ 3nm(FWHM at Hg546nm)   |
| Absorbance Precision     | 0.003Abs                 | 0.003Abs              | 0.005Abs              | 0.003Abs                 |
| Absorbance Accuracy      | 1%(7.332Abs at 260nm)    |                       |                       |                          |
| Absorbance Range         | 0.02 - 90A               | 0.02 - 100A           | 0.02 - 80A            | 0.02 - 100A              |
| Detects Nucleic Acid up  | 2-4500ng/ul (dsDNA)      | 2-5000ng/ul (dsDNA)   | 10-4000ng/ul (dsDNA)  | 2-15000ng/ul (dsDNA)     |
| Measurement Time         | <8S                      | <5S                   | <8S                   | <6S                      |
| Data Output              | Connect PC               | USB                   | USB                   | USB                      |
| Operating Voltage        | 24V DC                   | 24V DC                | 24V DC                | 24V DC                   |
| Operating Power          | 20W                      | 25W                   | 25W                   | 25W                      |
| Standby Power            | 5W                       | 5W                    | 5W                    | 5W                       |
| Packing Size (W x D x H) | 500 x 495 x 310mm        | 500 x 495 x 310mm     | 500 x 495 x 310mm     | 500 x 495 x 310mm        |
| Gross Weight             | 9.2kg                    | 9.2kg                 | 9.2kg                 | 9.2kg                    |
| Software Compatibility   | WinXP, Win7. Win8        | Android System        | Android System        | Android System           |
| Fluorescent detection    |                          |                       |                       |                          |
| Sensitivity              | —                        | —                     | dsDNA: 0.5pg/ul       | —                        |
| Linear Dynamic Range     | —                        | —                     | R <sup>2</sup> >0.995 | —                        |
| Repeatability            | —                        | —                     | <1.5%                 | —                        |
| OD600nm Measurement      |                          |                       |                       |                          |
| Light Source             | —                        | LED                   | LED                   | LED                      |
| Wavelength Range         | —                        | 600±8nm               | 600±8nm               | 600±8nm                  |
| Absorbance Range         | —                        | 0-4A                  | 0-4A                  | CMA                      |

# Flame Photometer

ISO/CE

## Application:

This instrument is used for analyzing & measuring the content & concentration of elements (K, Na, Li, Ca, Ba). It can be widely applied to agriculture (soil, fertilizer, tobacco), industry (cement, glass, ceramics, mineral or ore powder, fireproof material), food (wine, water), laboratory, clinical experiments and pathology research (serum, urine, plasma), etc.

## Characteristics:

1. With K, Na, Li, Ca, Ba five filters, which can detect three kinds of elements show three kinds of elements content simultaneous.
2. LCD/Touch Screen display, touch panel with numeric keypad.
3. With auto correlation coefficient calculating function.
4. With pre-select function for flame size.
5. A flameout protection device.
6. With single point calibration function.
7. Calibration curve can be saved.
8. With RS232 interface, can connect with external printer.
9. With a mist separator.
10. Easy adjustable Relief valve, direct view of pressure gauge.



## Select Models:

| Model       | Display      | Elements                                       | Example                                     |
|-------------|--------------|--|---|
| AE-FP8201   | LCD Display  | K, Na, Li, Ca, Ba 5 elements choose 2 elements | K,Na; K,Li; K, Ca; K,Ba; Li,Ca; Ca,Ba; etc  |
| AE-FP8201-A | LCD Display  | K, Na 2 elements                               | Straight-line method; Polygon method;       |
| AE-FP8201-B | LCD Display  | K, Na 2 elements                               | Straight-line method; Polygon method;       |
| AE-FP8202   | Touch Screen | K, Na, Li, Ca, Ba 5 elements choose 2 elements | K,Na; K,Li; K, Ca; K,Ba; Li,Ca; Ca,Ba; etc  |
| AE-FP8301   | LCD Display  | K, Na, Li, Ca, Ba 5 elements choose 3 elements | K, Na, Li; K,Na,Ca; K,Na,Ba; Li,Ca,Ba; etc  |
| AE-FP8302   | Touch Screen | K, Na, Li, Ca, Ba 5 elements choose 3 elements | K, Na, Li; K,Na,Ca; K,Na,Ba; Li,Ca,Ba; etc  |
| AE-FP8401   | LCD Display  | K, Na, Li, Ca, Ba 5 elements choose 4 elements | K, Na, Li,Ca; K,Na,Li,Ba; Na, Li,Ca,Ba; etc |
| AE-FP8402   | Touch Screen | K, Na, Li, Ca, Ba 5 elements choose 4 elements | K, Na, Li,Ca; K,Na,Li,Ba; Na, Li,Ca,Ba; etc |
| AE-FP8501   | LCD Display  | K, Na, Li, Ca, Ba 5 elements choose 5 elements | K, Na, Li,Ca, Ba;                           |
| AE-FP8502   | Touch Screen | K, Na, Li, Ca, Ba 5 elements choose 5 elements | K, Na, Li,Ca, Ba;                           |

## Technical Specifications:

|                      |   |
|----------------------|---|
| Measurement Range    | K: 0-100ppm, Na: 0-100ppm, Li: 0-100ppm, Ca: 0-1000ppm, Ba: 0-1000ppm           |
| Stability            | The biggest change in the relative volume in 15s: ≤3%                           |
| Linear Error         | K:0.2ppm, Na:0.5ppm, Li:0.1ppm, Ca:2ppm, Ba:8ppm.                               |
| Min. Detection Limit | K:0.1ppm, Na:0.1ppm, Li:0.1ppm, Ca:2ppm, Ba:8ppm.                               |
| Curve Calibration    | Straight-line method; Polygon method; Quadratic fit.                            |
| Linearity            | Better than the best results of the intermediate value of 2% (single-point CAL) |
| Standard Accessories | Air-compress for all models   |
| Standard Accessories | Micro-printer for all model, but not include AE-FP8201-A, AE-FP8201-B 2models.  |
| Optional Accessories | PC Software   |





# Atomic Absorption Spectrometer

## Features:

### Fully Automated

- \* The flame and graphite furnace is integrated into one instruments. The change over from one technique to another is carried out by simple key strokes within the software.
- \* The instruments have a motorised 8 hollow cathode lamp turret which allows the automatic positioning and optimization of each hollow cathode lamp by the software.
- \* The control of the gas flows for the fuel gas ( $C_2H_2$ ) and the positioning of the burner is also carried out directly from the software thus allowing optimization of the instruments for the best analytical parameter for a selected analysis.
- \* Two methods of background correction are available. The first utilises a deuterium lamp and the second is the proven method of self reversal.
- \* The location of the wavelength and peak selection is automatic and controlled from the software. The spectral bandwidth is automated and is available with a choice of five slit sizes.
- \* The electronic parameters for the photomultiplier detector, the hollow cathode lamp current and the balancing of the absorbance and background energies are controlled from the software.
- \* The ignition of the flame is computer controlled and the various safety interlocks offer a very safe operating system.



## Ordering Information:

| Order Code | Description  |
|------------|--|
| AE-AA990F  | Single Beam, 190-900nm, With Flame.                    |
| AE-AA990G  | Single Beam, 190-900nm, With Graphite Furnace.         |
| AE-AA990FG | Single Beam, 190-900nm, With Flame & Graphite Furnace. |

## Technical Specifications:

| Optic System             |   | Flame Analysis        |   |
|--------------------------|---|-----------------------|---|
| Wavelength Range         | 190nm-900nm   | Sensitivity(Cu)       | 0.03 $\mu$ g/ml/1%  |
| Spectral Bandwidth       | 0.1nm,0.2nm,0.4nm,1.0nm, 2.0nm (5steps, Automatic Changeover) | Heating               | Voltage feedback control when dry and ashing; Optical temperature control when atomizing.         |
| Monochromator            | Czemy-Turner Configuration                                    | Character Value       | 0.5Pg   |
| Wavelength Accuracy      | $\pm$ 0.25nm  | Burner Head           | Titanium Alloy Burner   |
| Wavelength Repeatability | <0.15nm   | Nebulizer             | Corrosion-resistant material  |
|                          |   | Atomization Chamber   | Corrosion-Resistant Material  |
| Baseline Stability       | 0.005A/30min  | Heating program:      | Up to 9 steps with choices of ramp, temperature increase and full-power heating                   |
| Lamps                    | 8 lamps simultaneously lit                                    | Background Correction | Deuterium Lamp Background Correction: 1.0Abs<br>self-Reversal Background Correction: 3.0Abs       |
| Power Supply             | AC 220V,50Hz, 200W.   | Position Adjustment   | Automatic Changeover of Flame and Furnace<br>Automatic setting of Optimum Height for Flame Burner |
| Packing Size & Weight    | 1280x745x740mm, 160kg   | Safety                | Automatic ignition and mixing air-acetylene gas with safety control                               |

# FT-IR Spectrometer

## Features

- High sensitivity optical system: cube-corner Michelson interferometer combined with patented fixing mirror alignment technology, to ensure long term stability, without the need of dynamic alignment which needs extra complicated electronic circuits. Reflecting mirrors are coated with gold to provide the maximum light throughput and ensure the detection sensitivity.
- High stability modular partition design: compact structure modular design with layout on cast aluminum base and overall balance of mechanical robustness and partition heat dissipation, offering higher ability of deformation resistance and less sensitive to vibrations and thermal variations, greatly improves the mechanical stability and long term working stability of the instrument.
- Intelligent multi-sealed moisture-proof design: multiple sealed interferometer, large-capacity desiccant cartridge with visible window and easy replacement structure, real-time monitoring of temperature and humidity inside the interferometer, getting rid of influences of high temperature, high humidity and chemical corrosions to the optical system in many ways.
- Innovated integration electronic system: high sensitivity integrated DLATGS detector pre-amplifier technology, dynamic gain amplification technology, high precision 24-bit A/D conversion technology, real-time control and data processing technology, digital filter and network communication technology, ensuring high quality real-time data collection and high-speed transmission.
- Good anti-electromagnetic interference capability: The electronic system is designed to meet CE certification and electromagnetic compatibility requirements, minimizing electromagnetic radiation in design and technology, in line with green instrument designing concept.
- High intensity IR source assembly: High intensity, long lifetime IR source module, with the highest energy distributed in fingerprint region, adopts a reflex sphere design to obtain even and stable IR radiation. External isolated IR source module and large space heat dissipation chamber design provide higher thermal stability and stable optical interference.
- The sampling compartment, reserving accessory mounting holes on the base plate, is wide enough for various accessories such as Defused/Specular Reflection, ATR, Liquid cell, Gas cell, and IR microscope etc.



## Specifications:

|                                |  |  |
|--------------------------------|--|--|
| <b>Interferometer</b>          | Cube-corner Michelson interferometer   |  |
| <b>Beam splitter</b>           | Multilayer Ge coated KBr   |  |
| <b>Detector</b>                | Room temperature DLATGS module (standard)  | Temperature stabilized, high sensitivity DLATGS module (optional)  |
| <b>IR Source</b>               | High intensity, long lifetime, air-cooled IR source  |  |
| <b>Wavenumber Range</b>        | 7800cm <sup>-1</sup> ~350cm <sup>-1</sup>  |  |
| <b>Resolution</b>              | 0.85 cm <sup>-1</sup>  |  |
| <b>Signal to noise ratio</b>   | Better than 20,000:1 (RMS value, at 2100cm <sup>-1</sup> ~ 2000cm <sup>-1</sup> or 2100cm <sup>-1</sup> ~ 2200cm <sup>-1</sup> , resolution: 4cm <sup>-1</sup> , detector: DLATGS, 1 minute data collection) |  |
| <b>Wavenumber Accuracy</b>     | ±0.01 cm <sup>-1</sup>   |  |
| <b>Scanning Speed</b>          | Microprocessor control, different scanning speed selectable.   |  |
| <b>Software</b>                | Main FTOS Suite software workstation, compatible to all version Windows OS   | Various specialized functional software modules (optional)   |
| <b>Communication</b>           | Ethernet interface (standard)  | WIFI wireless communication (optional)   |
| <b>Data Output</b>             | Standard data format, report generation and output   |  |
| <b>Status Diagnosis</b>        | Power on self check, real-time temperature and humidity monitoring and reminders   |  |
| <b>Certification</b>           |  | FDA 21 CFR Part11 compliance, IQ/OQ/PQ (Optional)  |
| <b>Environment Conditions</b>  | Temperature: 10°C ~ 30°C, humidity: less than 70%  |  |
| <b>Power Supply</b>            | AC220V±22V, 50Hz±1Hz   | AC110V (optional)  |
| <b>Dimensions &amp; Weight</b> | 520 x 435 x 255mm, 24kg  |  |
| <b>Accessories</b>             | Transmission sample holder (Standard)  | Optional accessories such as gas cell, liquid cell, Defused/Specular Reflection, single/multi reflection ATR, etc. |

# AE-R96PRO Fluorescence spectrophotometer

## Features

- \* Two operation mode could be chosen: fluorescence intensity and luminous intensity. Fluorescence scanning, kinetic determination and quantity analysis could be done under fluorescence intensity mode.
- \* 365nm exciting wavelength;
- \* Raman peak of water in 1 cm quartz fluorescence cuvette  $S/N \geq 150$ ;
- \* High performance sensitivity simplifies the measurement of low detective sample.
- \* 10 stages gain adjustment could be chosen for emission spectrum scanning, including high speed low  $S/N$  scanning and precise scanning. Total spectrum scanning could be done in 1 second. With the intelligent pre scanning feature, unknown sample's spectrum information could be detected rapidly. Auto-omission of the influence of scattering peak and harmonic peaks, it ensure the best measurement parameters and locate the fluorescence emission peak.
- \* Support off-line mode and on-line mode. Under off-line mode, instrument's computer system offer the fluorescence intensity measurement, concentration direct reading, auto 0 adjustment, auto background subtraction and etc. Under on-line mode, we could use quality and quantity software to control data acquisition and analysis through USB2.0 interface.
- \* High stable and long life 150W xenon lamp and power source ensure high stable testing and wide range of spectrum.
- \* The normalized feature for fluorescence value could make different fluorescence's result comparable.
- \* Provide optional PC qualitative and quantitative software package with expansible time scanning, wavelength scanning, graphic calculation and storage-access abilities
- \* Optional accessories for different measurement, including single hole cell holder, fluorescence sample holder for different features, 200 $\mu$ l micro scale centrifuge tube, micro scale capillary sample holder, semi-auto sample introduction accessories, membrane sample accessories, powder sample accessories, jacket sample accessories and etc.



## Applications and Features

Fluorescence analysis is a high sensitive and high selective sophisticated analytical method. This method can provide information including excitation and emission spectrum, emission light intensity and measurement of life of emission light and polarization fluorescence etc. This method can provide a wide lineal range of working curve. It has becoming an important analytical method in the region of trace analysis. This method has been used in:

1. Medical science and clinical analysis Clinical analysis of biological specimen;
2. Pharmaceutical science and pharmacology Analysis of natural pharmaceutical products; Quality control of pharmaceuticals and research of pharmaceutical metabolites;
3. Biochemistry Analysis of minute quantity of substances in biological body;
4. Food industry Analysis of minute quantity of constituents in food;
5. Pollution analysis Atmospheric pollution, environmental testing and food contamination analysis;
6. Organic and inorganic chemistry; Used in the trace analysis in case of those substances cannot be determined by absorption spectrophotometry.

## Specifications

| Model                      | AE-R96PRO   |
|----------------------------|---|
| Light source               | Hamamatsu 150W Xenon lamp   |
| Exciting optical filters   | Interference optical filter   |
|                            | Standard set is equipped with an interference optical filter of central wavelength at 365nm and 10nm bandwidth              |
|                            | An optional interference optical filter of 25mm diameter of wavelength of 250-700nm can be provided on users demand         |
| Emission monochromator     | C-T diffraction grating (Em 200~900nm, bandwidth10nm) Wavelength accuracy $\pm 1$ nm Wavelength repeatability $\leq 0.5$ nm |
| Sensitivity                | Raman peak of water in 1 cm quartz fluorescence cuvette with $S/N \geq 150$   |
| Linear measurement(r)      | $\geq 0.995$  |
| Stability                  | better than 1.5%/10min  |
| Variation of power source  | 220V $\pm$ 22V 50Hz $\pm$ 1Hz   |
| Response time              | (0.1-4)s 6 stages adjustable  |
| Fluorescence display value | 0.00-600.00   |
| Data transmission          | USB2.0  |

# F97 Series Fluorescence Spectrophotometer

## Brief Introduction

F97 fluorescent spectrophotometer is a new generation of high performance molecular luminescence analysis instrument. The product structure is exquisite, has the characteristics of high detection sensitivity, fast scanning speed, wide spectrum measuring range, high dynamic range, fast 3D scanning, and so on. Easily meet the requirements in the field of material research, pharmaceutical analysis, biochemical and clinical testing, water quality analysis and control, food safety testing (dairy products, aquatic products, such as vitamin C, selenium, aflatoxin), and other areas.



## Main Features

- 1.High sensitivity: based on high efficiency optical design and weak signal detection technology, the water Raman peak signal to noise ratio can be greater than 200 (P - P) to the leading domestic and international advanced level.
- 2.High scanning speed: the high speed digital signal processing unit provides the world's fastest scanning speed at 48000nm/min. Only 1 second to get classic fluorescence spectra, 1 minute to get high quality of three-dimensional fluorescence spectra.
- 3.Wide Spectral measurement range: using a double monochromator design, excitation and emission wavelength range covering 200 nm to 900 nm, meet the needs of most fluorescence analysis.
- 4.Excitation light path monitoring system: instrument is equipped with excitation light dual beam ratio monitoring system to ensure the fluorescence signal high and stable.
- 5.High quality assurance: using Hamamatsu's high quality Xenon light source and photoelectric multiplier tube detectors and instruments to provide sufficient light intensity signal and the detection sensitivity.
- 6.Built-in optical gate: Built-in optical gate, designed for unstable sample.

## Optional Parts

| Specification of F97 Series Fluorescence Spectrophotometer |   |
|--|---|
| Excitation Source  | 150W xenon lamp (Hamamatsu)   |
| Excitation Wavelength                                      | 200nm~900nm   |
| Emission Wavelength  | 200nm~900nm   |
| Excitation Slit  | F97XP/F97Pro: 2nm、5nm、10nm、20nm; F97: 10nm                                  |
| Emission Slit  | F97XP/F97Pro: 2nm、5nm、10nm、20n; F97: 10nm                                   |
| Wavelength Accuracy  | F97XP: $\pm 0.4\text{nm}$ ; F97/ProF97: $\pm 1.0\text{nm}$                  |
| Wavelength Repeatability                                   | F97XP: $\leq 0.2\text{nm}$ ; F97/F97Pro: $\leq 0.5\text{nm}$                |
| Signal-to-Noise Ratio                                      | F97XP: Raman peak of water (P-P) : $S/N \geq 200$ (10nm Slit)               |
|  | F97/F97Pro: Raman peak of water (P-P) : $S/N \geq 150$ (10nm Slit)          |
| Limit  | F97XP: $\leq 5 \times 10^{-11} \text{g/ml}$ (Quinine Sulfate Solution)      |
|  | F97/F97Pro: $\leq 1 \times 10^{-10} \text{g/ml}$ (Quinine Sulfate Solution) |
| Linearity  | $\gamma \geq 0.995$   |
| Peak Repeatability   | $\leq 1.5\%$  |
| Stability(10min)   | Zero Drift: $\pm 0.3$ ; Value Limit: $\pm 1.5\%$                            |
| Wavelength Scan Speed                                      | Multi-speed Level, Maximum at 48000nm/min                                   |
| Photometric Quantity Range                                 | 0.00-10000.00   |
| Data Transportation  | USB2.0  |
| Power Source/Power   | AC 220V/50Hz; 110V/60Hz; 200W   |
| Instrument Dimension/Weight                                | 380×445×310 (mm) / 12kg for NW, 14kg for GW                                 |

## Optional Parts:

| Accessories   | Functions   |
|---|---|
| Single sample rack  | Conventional liquid fluorescence sample                                 |
| Multi purpose fluorescent sample rack holder  | Base holder for other racks   |
| Double-frequency filter (300nm、350nm、400nm、450nm、500nm、550nm、600nm、650nm 8 for one set) | Remove the interference of double-frequency peaks of these wavelengths. |
| 200ul micro scale centrifuge tube rack  | For centrifuge tube fluorescence measurement                            |
| Micro scale capillary sample rack   | For micro scale capillary sample  |
| Semi-auto sample rack   | Semi-auto sample rack   |
| Membrane sample rack (Reflection)   | For membrane sample   |
| Membrane sample rack (Transmission)   | For membrane sample   |
| Powder sample rack  | For powder samples  |
| Jacket sample rack  |   |

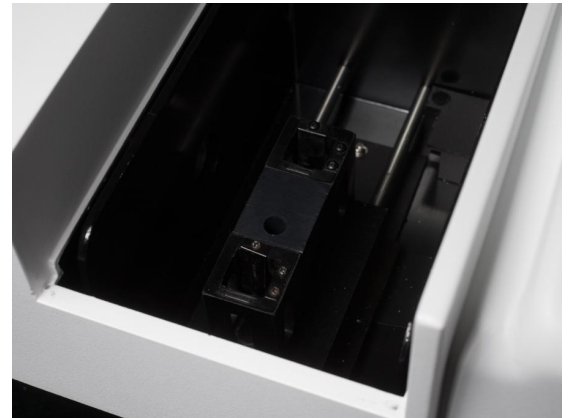
# S430 NIR Spectrophotometer

--For rapid non-destructive analysis of oil, alcohol, beverage and other liquids

S430 NIR spectrophotometer is a spectrophotometer with grating monochromator. This instrument is for rapid non-destructive analysis of oil, alcohol, beverage and other liquids. The wavelength range is 900nm-2500nm. The procedure is extremely convenient. Fill the cuvette with the sample and place it on the sample platform of the instrument. Click in the software to obtain the NIR spectrum data of the sample in about one minute. Combining the data with the corresponding NIR data model, various components of the tested sample can be obtained at the same time.

## Features:

- Easy to use. No sample preparation is required, and the sample is not damaged.
- Wavelength range is 900nm-2500nm.
- The main parts performance is the international leader.
- Built-in high-quality PTFE reference module and polystyrene wavelength standard filter. Automatic reference calibration and monitoring wavelengths ensure accurate and stable measurement results.
- The instrument monitors the ambient temperature and humidity in real time and stores it in the spectrum file, which is convenient for users to check and optimize the measurement conditions.



| Item                       | Details           |
|----------------------------|-------------------|
| Type                       | S430              |
| Measurement                | Transmission      |
| Bandwidth                  | 8nm               |
| Wavelength Range           | 900nm ~ 2500nm    |
| Wavelength Accuracy        | ≤0.2              |
| Wavelength Reproducibility | ≤0.05             |
| Stray Light                | ≤0.1%             |
| Noise                      | ≤0.0005 Abs       |
| Analysis time              | 1 minute or above |
| Port                       | USB2.0            |
| Power Supply               | 90~250V, 50/60Hz  |
| Temperature Requirement    | 5~35 °C           |
| humidity Requirement       | 5~85 %RH          |
| Dimension                  | 360mm×460mm×240mm |
| Weight                     | 12Kg              |



# High-Pressure Liquid Chromatography

## Isocratic & Gradient System HPLC

### Dectector Unit

Detector units include: UV/UV-VIS, FLD, DAD, RID, ELSD.

### Infusion Unit

Infusion units include: analytical type, semi-preparative type, high pressure semi & preparative type.

The Semi-PRE HPLC system can fulfill most analysis and preparation requirements. The high pressure preparation HPLC system is mainly used in small-scale sample preparation and purification in laboratories.

- \* The new upgraded pump reserves the classic reciprocating parallel pump design to provide accurate flow and minimize pressure fluctuations.
- \* The structure of one piece check valve is simple and provides excellent leak resistance.
- \* The piston rod can be retracted automatically so you to replace the piston seal easily without opening the instrument case.
- \* New piston ringse function adopts dual-piston seals design, it is provided for buffer salt systems.
- \* Less noise and higher reliability.
- \* Extended warranty service and more comprehensive after-sales service to assist with your analysis.



Specifications of infusion unit

### Analytical system:

Model: P100 (Analytical)

Liquid Infusion System: Dual-piston reciprocating parallel pump, equipped with a binary high-pressure mixer.

Flow Rate Range: 0.001-10mL/min.

Max Output Pressure: 42 MPa.

Flow Accuracy:  $\cong \pm 1\%$

Flow Precision: RSD<0.07%

Qualitative Repeatability: RSD<sub>6</sub> ≤ 0.1% (naphthalene/methanol standard)

Quantitative Repeatability: RSD<sub>6</sub> ≤ 0.3% (naphthalene/methanol standard)

Pressure Fluctuation: 0.1 MPa

Power Supply: 220V/110V

### Semi-preparation System:

Model: P100SP (40ml) semi-preparation system

Flow Rate Range: 0.01-40mL/min

Pressure Range: 0-25 MPa

Flow Accuracy:  $\pm 2\%$

Flow Rate Accuracy: RSD<0.1%

### High Pressure Semi-Preparation System and High Pressure Preparation System.

Model: P100HSP (50ml) P100HP (120ml)

Flow Rate Range: 0.01-50ml/min, 0.01-120ml/min

Pressure Range: 0-42 MPa

Flow Accuracy:  $\pm 2\%$

Flow Rate Accuracy: RSD<0.2%



# Gas Chromatograph

## Application

GC is suitable but no limited to below application: food safety, environmental protection, energy (Petroleum refining), medicine industry and etc.

## Instruments Features:

- \* PCM control module much precise with independent-development AFC system;
- \* 8-channel high-accuracy temperature control system and 8-channel outside events to fulfill counter-control ;
- \* Every gas circuit can achieve constant-pressure, constant-flow, constant-speed, programmable-temperature-rise, programmable-flow-rise and programmable-speed-rise;
- \* Unlimited valve events to fulfill accurate switching of multi-valve;
- \* Outside power & voltage checking system, over-heating protection system and flow monitoring system to make it intellectualized.
- \* Vacuum fluorescent display with english/chinese changeable;
- \* Multi-function keyboard can set complicated parameters and store 16 chromatography method;
- \* FID and FPD can provide reminder for auto ignite and turn-off, TCD with overflow/cut-off protection;
- \* Excellent FID wide-range to enhance linear range;
- \* Multi-valve and multi-column switch system to make sure complicated analysis at one times injection;
- \* PCB system shielding function to reduce interference;
- \* Carrier gas saving mode available to reduce cost;
- \* Autosampler, headspace and thermal desorption can be incorporated;
- \* Clarity workstation can fulfill 3Q certification to meet GMP/GLP standard



## AFC Features:

- \* AFC: split/splitless mode, carrier gas can fulfill constant-pressure, constant-flow, constant-speed, programmable-temperature-rise, programmable-flow-rise and programmable-speed-rise to reduce sample decomposition and discrimination while increase separation and shorten analysis time.
- \* EPC AFC fulfill digitalization and automatization, only need input column parameters, /
- \* EPC/AFC can set best flow of column and show digitally.
- \* EPC/AFC can fulfill gas leaking self-diagnosis and cut off flow&gas source and alarm at the same time.

## Multi-valve and multi-column switch:

AdoptingAFP pneumatic valve, can setup 3-valve-4-column and 4-valve-5-column switch system to fully analyze only at one times in petrochemical,

## Clarity workstation is applicable

- \* Multi-channel and multi-user universal workstation to control all parameter
- \* Can collect signal from 4 detectors via RS232 or USB
- \* Basic parameter: max sample-collecting frequency @100Hz/unlimited peak process quantity/integral sensitivity @1 \*s  $\mu$ V
- \* Batch processing makes machine control, auto sampling sequence collecting, auto integral correction much easier
- \* Fully support FDA-21CFR PART 11, SST AND IQ/OQ
- \* Powerful post-treatment facilitate chromatography comparing, re-correction and data

## Workstation Feature:

- \* Fully counter-control to set all parameter in workstation
- \* Easy operational
- \* Multi-channel signal sampling, multi outside events control

## Autosampler

- \* Big displayer with double -tower automatic injection;
- \* Tray vial quantity: 16 or 150;
- \* Injection volume: 0.1-100uL;
- \* Sampling accuracy: 0.01uL;  $\pm$  .
- \* Injection needle: 5, 10, 50, 100uL;
- \* Injection repeatability: <0.5%

# AE-610 Series

## Feature

- Up to 12 vessels to meet different digestion requirements.
- Vertical Microwave design for even distribution of microwave.
- Real time monitoring for both temperature and pressure of each vessel.
- Contactless monitoring with no burst disk design saves consumable cost and maintenance cost.
- Imported vessel material for both sample vessel and protection vessel ensures safety.
- Touch screen with user-friendly interface for easy operation.
- Imported CFRP with high strength ensures impact resistance.
- Pre-installed international standard methods while user can also edit, save, modify and delete own method.
- 316L stainless steel tank with teflon coating avoids erosion and ensures fast cooling.
- Special magnetron design which carries out high microwave leakage standards.



## Parameter

| Model                         | AE-610-T6   | AE-610-T8 | AE-610-T10 | AE-610-T12 |
|-------------------------------|---|-----------|------------|------------|
| Vessels                       | 6   | 8         | 10         | 12         |
| Temperature Monitoring System | All vessel temperature Control;<br>Contactless temperature monitoring;<br>Temperature Accuracy:±0.1℃,<br>Temperature Range:50~400℃,<br>Display Accuracy:0.1℃      |           |            |            |
| Pressure Monitoring System    | All vessels pressure control<br>Contactless pressure monitoring<br>Pressure control range:0~15MPa<br>Pressure Accuracy : ±0.01MPa<br>Display Accuracy: ± t0.01Mpa |           |            |            |
| Vessel Volume                 | 100ml   |           |            |            |
| Vessel Material               | Imported TFM  |           |            |            |
| Protection vessel material    | Peek +Glass Fiber   |           |            |            |
| Display                       | 7inch Touch Screen  |           |            |            |
| Rotation                      | One Direction 360°continuous rotating   |           |            |            |
| Microwave Tank                | 316L stainless steel tank with erosion-proof coating  |           |            |            |
| Microwave Power               | 0~1000W (adjustable)  |           |            |            |
| Microwave Leakage             | <5mw/cm <sup>2</sup>  |           |            |            |
| Air exhaust                   | High power erosion-proof air blower   |           |            |            |
| Power                         | AC220V+10%.10A,50/60HZ  |           |            |            |
| Dimension                     | 560mm*490mm*630mm   |           |            |            |

# PCR-Cycler (Polymerase Chain Reaction)

## Cycler 003 series Features:

- \* The Cycler 003 thermal cycler is reliable with excellent ramping rate (maximum over 5 °C/sec) and most economic personal PCR. The Cycler 003 is designed to be compact and portable. It is only 600 cm<sup>2</sup> footprint and weighs 6.8 Kg.
- \* The self-adjusted heated lid (100°C to 115°C), designed to reduce the risk of sample evaporation, can be enabled or disabled. The heated lid only comes on if the block is set above 35°C.
- \* The powerful programming logic makes it user friendly.
- \* Several common used methods have been created as templates for users, this helps with even the most complicated protocol program set ups.
- \* The on-screen displayed ramping rate helps users to monitor the working condition of the machine.



## Cycler 005/006 series Features:

- \* The Cycler 005/006 provides the researcher with the means of accurately controlling the temperature profile of samples. It has many scientific applications, including DNA amplification and sequencing.
- \* The Cycler 005/006 can cycle samples between 4°C and 99°C.
- \* The Cycler 005/006 is programmed by means of an integral keypad and LCD display. A program, which can be recalled from memory, consists of:
  - a series of specified temperatures in °C
  - the times for which each specified temperature will be held (Hold Times)
  - the desired heating or cooling rates, in °C/sec, between each specified temperature
  - optional instructions as to whether the times and/or the temperatures are to increase or decrease when a cycle is repeated.
- \* The memory can store up to 100 programs.

## Model Select:

| Model     | Block Size              | Gradient Details                           |
|-----------|-------------------------|--|
| Cyl-003-1 | 25 x 0.2ml, 120V / 230V | NO   |
| Cyl-003-2 | 20 x 0.5ml, 120V / 230V | NO   |
| Cyl-003-3 | 48 x 0.2ml, 120V / 230V | NO   |
| Cyl-003-4 | 30 x 0.5ml, 120V / 230V | NO   |
| Cyl-005-1 | 48 x 0.2ml, 120V / 230V | Half Size, Range: 20°C to 80°C, Max. 15°C  |
| Cyl-005-2 | 30 x 0.5ml, 120V / 230V | Half Size, Range: 20°C to 80°C, Max. 15°C  |
| Cyl-006-1 | 96 x 0.2ml, 120V / 230V | Full Size, Range: 20°C to 70°C, Max. 30°C. |
| Cyl-006-2 | 60 x 0.5ml, 120V / 230V | Full Size, Range: 20°C to 70°C, Max. 30°C. |

## Technical Specifications:

|   |                |
|---|----------------|
| Temperature range                         | 4°C to 99°C    |
| Block uniformity                          | ± 0.5°C        |
| Temperature accuracy                      | ± 0.5°C        |
| End of program cooling below ambient      | YES            |
| Maximum heating rate                      | 4.5°C/sec      |
| Maximum cooling rate                      | 3°C/sec        |
| Heated lid temperature                    | 100°C to 115°C |
| Heated lid enable/disable                 | YES            |
| Program naming using alpha keys           | YES            |
| Program password protection               | YES            |
| Number of programs (3 step)               | 100            |
| HeightxWidthxLength: 185mmx185mmx330mm    |                |
| Weight: 6.8kg                             |                |
| Power: AC INPUT: 120V or 230V with Switch |                |

# Real-Time Thermal Cycler

## MINI8-Plus

### Features

- Power: 12V DC universal power supply or battery pack.
- User friendly: Simple interface
- Small footprint and light weight: 205 x190x98 mm (LxWxH) and only 2.1 kg
- High sensitivity: As low as 1 copy
- Sample capacity: 8\*0.2 ml PCR tubes
- Two channels: SYBR/FAM, ROX/Texas Red SYBR/FAM, HEX/VIC
- Open system: Compatible with most commercial reagents
- After each run, system automatically emails data to an email address chosen by user



### Technical Specifications

| Model                            | MINI-8 Plus  |
|----------------------------------|--|
| Block Size                       | 8X0.2ml  |
| <b>Optical</b>                   |  |
| Light Source                     | High Power LED   |
| Detector                         | Photodiode   |
| <b>Thermology Parameters</b>     |  |
| Heating/cooling model            | Peltier  |
| Ramping Rate(Max.)               | 3°C /s   |
| Thermal Uniformity               | ±0.2°C   |
| Thermal Accuracy                 | ±0.2°C   |
| Temperature Range                | 4-100°C  |
| <b>Operational</b>               |  |
| Sample Format                    | 8 Wells  |
| Reaction Volume                  | 15-150 µL  |
| Sensitivity of Detection         | 1 Copy   |
| Melting Curve                    | Supported Resolution to 0.5°C  |
| Multiplexing                     | ROX version: Detect Up to 2 Dyes Simultaneously, 470/520nm (SYBR/FAM); 565/625nm (ROX/Texas Red)<br>VIC version: 470/520 nm (SYBR/FAM); 520/570 nm (HEX/VIC) |
| <b>Physical</b>                  |  |
| Dimensions                       | 205x190x98mm (LxWxH)   |
| Net Weight                       | 2.1 kg   |
| <b>Computer Configuration</b>    |  |
| PC Requirement                   | WIN7 / WIN8.1 / WIN10  |
| <b>Environmental Requirement</b> |  |
| Ambient Temperature              | Operating Temp: 15-30°C Storage Temp: 10-60°C  |
| Ambient Humidity                 | Operating Humidity: 15-90%<br>Relative Humidity Storage: 5-95%   |
| Power Supply                     | 12V DC, 10A  |

# Hotplate Stirrers



550 °C series magnetic stirrer is developed for demanding applications. It is widely used in chemical synthesis, physical and chemical analysis, bio-pharmaceuticals, to name a few, etc. Combining with glass ceramic work plate, brushless DC motor, external temperature sensor and the work plate temperature optimized up to 550 °C.

## Features:



Over heating protection;



External sensor;



Wide range of accessory;



Chemical resistance.

## MS7-H550-Pro: LCD Digital Magnetic Hotplate Stirrer

1. LCD display for precise monitoring of speed and temperature;
2. Built-in PID controller ensures the safe heating of the medium with overheating protection.
3. Glass ceramic work plate provides excellent chemical resistant performance and most efficient heat transfer.
4. External temperature control is possible by connecting the temperature sensor (PT1000) with an  $\pm 0.2^{\circ}\text{C}$  accuracy.
5. Digital speed controlling, max.speed at 1500rpm.
6. Outstanding brushless DC motor performance enables more stirring power;
7. Two rotating knobs enable the easy and direct change of speed and temperature.
8. The "HOT" warning will flash when the work plate temperature is above  $50^{\circ}\text{C}$  even if the hotplate is turned off.
9. Remote function provides PC control and data transmission.



## MS7-H550-S: LED Magnetic Hotplate Stirrer

1. LED display for precise monitoring of temperature;
2. External temperature control is possible by connecting the temperature sensor (PT1000) with accuracy at  $\pm 0.2^{\circ}\text{C}$ ;
3. The "HOT" warning will flash when the work plate temperature is above  $50^{\circ}\text{C}$  even the hotplate is turned off.

## Technical specifications:

| Model                                    | MS7-H550-Pro  | MS7-H550-S                     |
|--|---|--------------------------------|
| Work plate dimensions (WxD)              | 184x184mm (7 inch)                                  |                                |
| Work plate material                      | Glass ceramic                                       |                                |
| Motor type                               | Brushless DC motor                                  | Shaded pole motor              |
| Motor rating input                       | 18W   | 15W                            |
| Motor rating output                      | 10W   | 1.5W                           |
| Power                                    | 1050W   | 1030W                          |
| Heating output                           | 1000W   | 1000W                          |
| Voltage                                  | 100-120/200-240V 50-60Hz                            |                                |
| Stirring positions                       | 1   |                                |
| Max.stirring quantity (H <sub>2</sub> O) | 20L   | 10L                            |
| Max. Magnetic bar (length)               | 80mm  |                                |
| Speed range                              | 100-1500rpm (resolution $\pm 1$ rpm)                | 0-1500rpm                      |
| Speed display                            | LCD   | Scale                          |
| Temperature display                      | LCD   | LED                            |
| Heating temperature range                | Room temp-550°C, increment 1°C                      | Room temp-550°C, increment 5°C |
| Temperature control accuracy             | $\pm 1^{\circ}\text{C}$ (<100°C) $\pm 1\%$ (>100°C) | $\pm 10^{\circ}\text{C}$       |
| Overheating protection                   | 580°C   |                                |
| Temperature display accuracy             | $\pm 0.1^{\circ}\text{C}$                           |                                |
| External temperature sensor              | PT1000 (accuracy $\pm 0.2$ )                        |                                |
| "Hot" warning                            | 50°C  |                                |
| Data connector                           | RS232   | -                              |
| Protection class                         | IP21  |                                |
| Dimensions (WxDxH)                       | 215X360X112mm                                       |                                |
| Weight                                   | 5.3kg   | 4.5kg                          |
| Ambient temperature and humidity         | 5-40°C 80%  |                                |



# Dry Bath

## Features:

1. A wide range of temperature control up to 120°C;
2. Timer function support is available;
3. Various types of optional blocks are available;
4. Overheating protection;
5. Lid for protection and heat preservation.



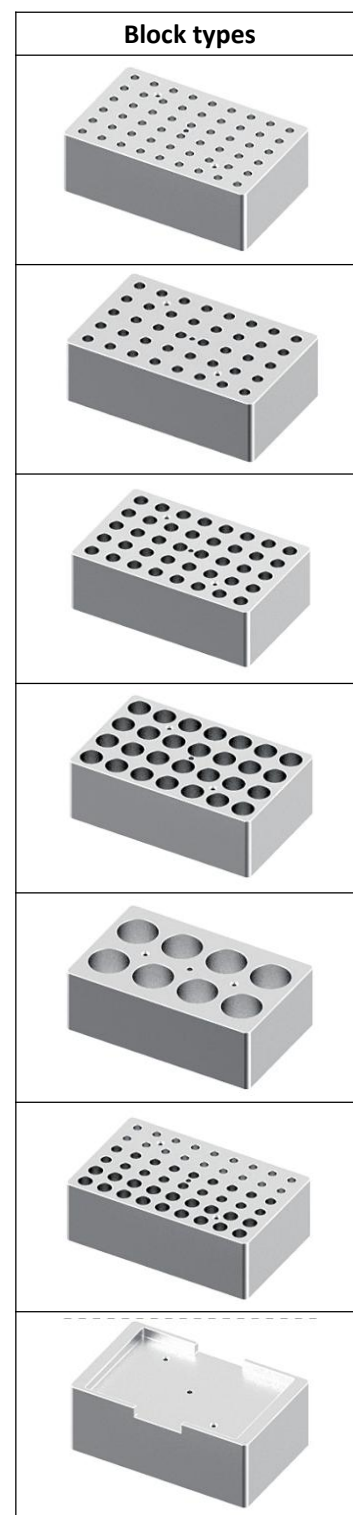
Adapter block selection/Overheating protection/Timer/LED display

## Technical Specifications:

| Model                        | HB120-S                      |
|------------------------------|------------------------------|
| Functions                    | Heating                      |
| Temperature range            | Room temp.~120°C             |
| Temperature control accuracy | ±0.5°C                       |
| Temperature uniformity       | ±0.5°C                       |
| Max heating rate             | 5.5°C/min                    |
| Timer                        | 1min-99h59min                |
| Screen                       | LED                          |
| Overheating protection       | 140°C                        |
| Adapter block material       | aluminum                     |
| Voltage, frequency           | 100-120V/220-240V, 50Hz/60Hz |
| Power                        | 160W                         |
| Dimensions (WxDxH)           | 95x150x50mm                  |
| Weight                       | 3kg                          |

## Accessories:

| Cat.No.                            | Capacity                        | Diameter Depth  |
|------------------------------------|---------------------------------|-----------------|
| 18900218                           | 0.2mlx54                        | 6.4mm<br>15mm   |
| 18900219                           | 0.5mlx40                        | 8.2mm<br>26.4mm |
| 18900253 (1.5ml)<br>18900220 (2ml) | 1.5/2mlx40                      | 11mm<br>34.7mm  |
| 18900221                           | 5/15mlx28                       | 17mm<br>48mm    |
| 1890022                            | 50mlx8                          | 29.8mm<br>48mm  |
| 1890024                            | 0.2ml+0.5ml+1.5/2ml<br>18+18+18 | -               |
| 18900223                           | 96 or 384 well plate            | -               |





# Tube Roller Mixer

## Applicataion:

ATRL Series tube roller mixer compact in design, adopts brushless DC motor and microcomputer control system. It is used in mixed blood samples, sticky and solid liquid suspension, etc, scrolling and swing two modes to provide a combination of efficient and safe, applicable to prevent blood clots and other similar applications.



## Major Features:

1. Touch Screen control system, easy operate.
2. The program control system can complete the multi time and multi-speed setting.
3. Timer conversion system can easy setting second, minute and hour.
4. 20 programmable setting to reduce labor intensity of operation.
5. Adopts brushless DC motor, no maintenance.
6. Rolling and Rocking two types can let operator easy choose it.

## Technical Specifications:

| Model               | ATRL-1             | ATRL-3 | ATRL-5      |
|---------------------|--------------------|--------|-------------|
| Mode                | Rolling & Rocking  |        |             |
| Rocking Angle       | 25mm               |        |             |
| Max. Load           | 10kg               |        |             |
| Number of roller    | 6                  |        |             |
| Motor               | Brushless DC motor |        |             |
| Display             | Touch Screen       | Analog | LCD Display |
| Speed Accuracy      | 1rpm               |        |             |
| Length of roller    | 280mm              |        |             |
| Speed range         | 10-80rpm           |        |             |
| Timer Range         | 1S-999h            | NO     | 1S-999h     |
| Size [D×W×H]        | 450×260×120mm      |        |             |
| Gross Weight        | 4.5kg              |        |             |
| Voltage             | AC100-240 50-60HZ  |        |             |
| Power               | 25W                |        |             |
| Operate Environment | 4-45℃              |        |             |
| Relative Humidity   | 70% or less        |        |             |



# Vortex Mixer

## Vortex Mixers

- \*Fixed Speed Touch Mode-Sample,economic and high power stirring
- \*Dual Speeds and Dual Modes-Selective modes(Touch and Continuous)with selective speed(2800rpm for Touch, and 1200rpm for Continuous)
- \*Two Modes and Adjustable Speed



## Vortex Mixer Specifications:

| Model               | AVT-501  | AVT-502        | AVT-503                               |
|---------------------|--|----------------|---------------------------------------|
| Speed (rpm)         | 1000 in continuous mode and 2800 in touch mode                     | 2800           | Digital display, adjust speed 2800rpm |
| Orbit. (mm)         | 4.2  |                |                                       |
| Action Type         | Touch and continuous   | Touch          | Touch and continuous                  |
| Type of Accessories | 1 rubber cup and plastic adapter                                   | 1 rubber cup   | 1 rubber cup                          |
| Maximum Load (kg)   | 1  | 1              | 1                                     |
| Net Weight (kg)     | 3.2  | 3.2            | 3.2                                   |
| Power Supply        | AC-DC Adapter, UL and rated<br>AC input: 90-230V, DC output: 6V,3A |                | 220V+/-10% or 110v+/-10%              |
| Accessory Code      | Description  | Accessory Code | Description                           |
| AVT-01              | Rubber Cup   | AVT-05         | Foam with 60X0.5 well                 |
| AVT-02              | Plate Adapter with Rubber Disc                                     | AVT-06         | Foam with 12mm well                   |
| AVT-03              | Plain Adapter Foam   | AVT-07         | Foam with different well.             |
| AVT-04              | Foam with 96X0.2 well  |                |                                       |

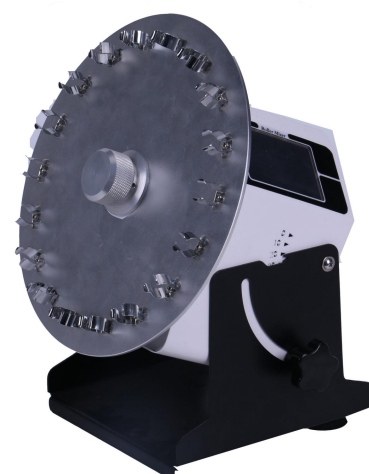
# Rotatory Mixer

## Features:

- \* Touch Screen display time and speed.
- \* It can adjusted from 0-90degree.
- \* Timing facution from 0-9999mins.
- \* DC brushless motor, speed control accuracy, long life and maintenance-free.

## Technical Specifications:

| Model                   | ARM-801 (Touch)       |
|-------------------------|-----------------------|
| Display                 | Touch Screen          |
| Speed range (rpm)       | 10-80rpm              |
| Timer (min)             | 0-9999min             |
| Gradient Range          | 0-90°                 |
| Temperature Restriction | <65°C (dry air)       |
| Input voltage           | AC85-265V             |
| Power                   | 35W                   |
| Dimension & Weight      | 200x265x305mm & 2kg   |
| Optional Holders        |                       |
| A                       | 50ml V-botton tubeX10 |
| B                       | 15ml V-botton tubeX18 |
| C                       | 1.5ml tube X64        |



# Thermo Shaker

Designed for simultaneous heating, cooling and mixing of small samples, TSI-100/TSI-200 can be supplied with interchangeable blocks for microtubes. Mixing, heating and cooling modes can be used either simultaneously or independently. The main body of the Mixing Block can be used with different kinds of blocks

## • Features:

1. LCD display. It is easy to set up and use
2. Accurately control and display time, temperature and speed
3. Over-heating protection device ensures safety & reliability
4. Low noise working even under the speed of 1,500rpm
5. Conforms to CE safety standard
6. Peltier design of TSI-100 provides thermal control in a compact unit



## • Specification

| Model                     | TSI-200       | TSI-100   |
|---------------------------|---------------|---|
| Temperature Control Range | RT+5°C-100°C  | 0°C~100°C if Ambient temp. ≤20°C<br>4°C~100°C if Ambient temp. ≤25°C<br>10°C~100°C if Ambient temp. ≤30°C |
| Temperature Setting Range | 5°C-100°C     | 0°C~100°C   |
| Timer                     | 1min-00h59min | 1min-00h59min   |
| Temp.Control Accuracy     | ±0.5°C        | ±0.5°C  |
| Display Accuracy          | ±0.1°C        | ±0.1°C  |
| Mixing Speed              | 200~1500rpm   | 200~1500rpm   |
| Heating Time(25 to 100°C) | ≤12min        | ≤15min  |
| Cooling Time              | ----          | ≤30min (from RT.to RT.-20°C)<br>≤15min (from100°C to -20°C)   |
| Mixing Orbit              | 2mm           | 2mm   |
| Dimension(mm)             | 300X220X175   | 300X220X175   |
| Net Weight                | 7kg           | 8.5kg   |

## Accessories-Different Size Block

| Type | Description                | Max.Speed |
|------|----------------------------|-----------|
| A    | 96x0.2ml                   | 1500rpm   |
| B    | 54x0.5ml                   | 1500rpm   |
| C    | 35x1.5ml                   | 1500rpm   |
| D    | 35x2.0ml                   | 1500rpm   |
| E    | 15x0.5ml+20x1.5ml          | 1500rpm   |
| F    | 24xDiameter ≤ ϕ 12mm tubes | 1200rpm   |
| G    | 12x15ml Falcon             | 750rpm    |
| H    | 6x50ml Falcon              | 750rpm    |
| I    | 103x67x30mm Bath Block     | 1500rpm   |
| J    | 96x0.2ml Microplate        | 1500rpm   |
| K    | 24x5ml tubes               | 1200rpm   |
| L    | 96-Deep well plate         | 800rpm    |
| M    | 15x5ml Eppendorf tubes     | 1200rpm   |

# Bacti-Cinerator Sterilizer

## Application:

The **Bacti-Cinerator Sterilizer** sterilizes microorganisms utilizing infrared heat produced by a ceramic core element. The ceramic element contains no asbestos and ensures maximum sterility without splatter across the work surface area. Complete sterilization occurs within 5-7 seconds at optimum sterilizing temperature of 1500°F (815.6°C). The small footprint makes the Bacti-Cinerator Sterilizer an ideal instrument for anaerobic and aerobic chambers alike. Several user friendly accessories are also available for the Bacti-Cinerator sterilizer.



## Features:

1. Sterilizes needles, loops, and culture tube mouths in five to seven seconds at optimum sterilizing temperature of 815.6°C (1500°F).
2. Ceramic funnel tube enclosed in stainless-steel perforated guard and stainless-steel support stand. For AC220V 50/60Hz

## Specification:

| Model                            | BCS-14        | BCS-35       | ST800         |
|----------------------------------|---------------|--------------|---------------|
| Display                          | Analog        | Analog       | LED Display   |
| Center High Temperature          | 825°C+/-50°C  |              | 300~830°C     |
| Max.Diameter of Sterilizer Goods | Φ14           | Φ35          | Φ15           |
| Length of Sterilizer             | 150mm         | 100mm        | 140mm         |
| Dimensions (DXWXH)               | 185X100X190mm | 162X98X192mm | 158x192x290mm |
| Power                            | 170W          | 320W         | 190W          |
| Net Weight                       | 1.5kg         |              |               |

# Glass Bead Sterilizer

This machine is a Quick, Easy and Accurate alternative to traditional methods of sterilization. Once switched 'ON', the units are ready to use within 15 Minutes and ensure total sterilization by destruction of all Micro-Organisms within 10 seconds. Glass Bead Sterilizers are incorporated with an imported thermostat, which maintains the temperature with 100-300°C. These units, having a stainless steel body, are compact enough to be placed on any Laminar Air Flow Work benches or any other work side tables in a clean room atmosphere.



## Specification:

| Model  | GBS-10A                      | GBS-10B    |
|--|------------------------------|------------|
| Crucible size  | Φ40×80 mm                    | Φ40×140 mm |
| Preset Temperature Range   | 100-300°C                    |            |
| Temperature Accuracy   | ≤±5°C                        |            |
| Initial Stabilization Time   | 10 minutes                   |            |
| Up to Max.Temp Time  | ≤25mins                      |            |
| Weight of Glass Bead   | 150g                         | 300g       |
| Material of Lid  | Stainless                    | Stainless  |
| Wattage  | 120W                         | 250W       |
| Input  | 100-120 V/ 200-240V, 50/60Hz |            |
| NOTE: Temperature Range can be set according to customers requirements |                              |            |

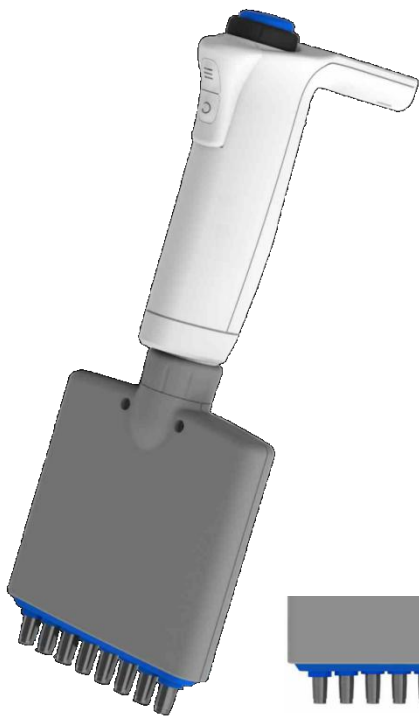
# Single Channel Electronic Pipette



## Technical Specification:

| Model  | Volumn    | Increment | Volume (μl) | Systematic Error |      | Random Error |      |
|--|-----------|-----------|-------------|------------------|------|--------------|------|
|  |           |           |             | +/-μl            | +/-% | +/-μl        | +/-% |
| AE-EP003   | 0.1-3ul   | 0.05ul    | 0.3         | 0.03             | 10   | 0.018        | 6    |
|  |           |           | 1.5         | 0.036            | 2.4  | 0.024        | 1.6  |
|  |           |           | 3           | 0.039            | 1.3  | 0.024        | 0.8  |
| AE-EP0010  | 0.2-10ul  | 0.1μl     | 1           | 0.025            | 2.5  | 0.015        | 1.5  |
|  |           |           | 5           | 0.075            | 1.5  | 0.035        | 0.7  |
|  |           |           | 10          | 0.1              | 1    | 0.04         | 0.4  |
| AE-EP0020  | 0.5-20ul  | 0.1ul     | 2           | 0.15             | 7.5  | 0.04         | 2    |
|  |           |           | 10          | 0.15             | 7.5  | 0.05         | 0.5  |
|  |           |           | 20          | 0.2              | 1    | 0.06         | 0.3  |
| AE-EP0100  | 2-100ul   | 0.5ul     | 10          | 0.2              | 2    | 0.1          | 1    |
|  |           |           | 50          | 0.4              | 0.8  | 0.15         | 0.3  |
|  |           |           | 100         | 0.6              | 0.6  | 0.15         | 0.15 |
| AE-EP0200  | 5-200ul   | 1μl       | 20          | 0.5              | 2.5  | 0.2          | 1    |
|  |           |           | 100         | 0.8              | 0.8  | 0.25         | 0.25 |
|  |           |           | 200         | 1.5              | 0.75 | 0.4          | 0.2  |
| AE-EP0300  | 10-300ul  | 1ul       | 30          | 0.75             | 2.5  | 0.24         | 0.8  |
|  |           |           | 150         | 1.05             | 0.7  | 0.3          | 0.2  |
|  |           |           | 300         | 1.2              | 0.4  | 0.45         | 0.15 |
| AE-EP0500  | 10-500ul  | 2ul       | 50          | 0.8              | 1.6  | 0.35         | 0.7  |
|  |           |           | 250         | 1.2              | 0.48 | 0.6          | 0.24 |
|  |           |           | 500         | 2                | 0.4  | 0.8          | 0.16 |
| AE-EP1000  | 50-1000ul | 5μl       | 100         | 2                | 2    | 0.6          | 0.6  |
|  |           |           | 500         | 2.5              | 0.5  | 1            | 0.2  |
|  |           |           | 1000        | 4                | 0.4  | 1.5          | 0.15 |
| AE-EP5000  | 0.1-5ml   | 25μl      | 500         | 5                | 1    | 2.5          | 0.5  |
|  |           |           | 2500        | 12.5             | 0.5  | 5            | 0.2  |
|  |           |           | 5000        | 30               | 0.6  | 10           | 0.2  |
| AE-EP10000   | 1-10ml    | 100ul     | 1000        | 50               | 5.0  | 6            | 0.6  |
|  |           |           | 5000        | 50               | 1.0  | 10           | 0.2  |
|  |           |           | 10000       | 60               | 0.6  | 16           | 0.16 |
| <b>Single Channel Pipette for Polymerase chain reaction (PCR)</b>  |           |           |             |                  |      |              |      |
| <b>(Note: This Series pipette is more suitable for Polymerase chain reaction and molecular experiment)</b> |           |           |             |                  |      |              |      |
| AE-EP10P   | 0.2-10ul  | 0.1μl     | 1           | 0.025            | 2.5  | 0.95         | 1.5  |
|  |           |           | 5           | 0.06             | 1.2  | 0.02         | 0.4  |
|  |           |           | 10          | 0.08             | 0.8  | 0.025        | 0.25 |
| AE-EP200P  | 5-200ul   | 1μl       | 20          | 0.5              | 2.5  | 0.15         | 0.75 |
|  |           |           | 100         | 0.6              | 0.6  | 0.2          | 0.2  |
|  |           |           | 200         | 1.2              | 0.6  | 0.3          | 0.15 |
| AE-EP1000P   | 50-1000ul | 5μl       | 100         | 1.5              | 1.5  | 0.5          | 0.5  |
|  |           |           | 500         | 1.2              | 0.24 | 0.8          | 0.16 |
|  |           |           | 1000        | 2.5              | 0.25 | 1            | 1    |

# 8 & 12 Channels Electronic Pipette



Arc-shaped removable tips



For 8 & 12 channel pipette, if you have this manual pipette, you just need buy the upper machine from us, the down part can using in our machine

## Technical Specifications:

| Order Code | Volume Range         | Increment          | Volume ( $\mu\text{l}$ ) | Systematic Error  |      | Random Error      |       |
|------------|----------------------|--------------------|--------------------------|-------------------|------|-------------------|-------|
|            |                      |                    |                          | +/- $\mu\text{l}$ | +/-% | +/- $\mu\text{l}$ | +/-%  |
| AE-EP8011  | 0.2-10 $\mu\text{l}$ | 0.01 $\mu\text{l}$ | 1                        | 0.025             | 2.5  | 0.015             | 1.5   |
| AE-TP1201  |                      |                    | 5                        | 0.06              | 1.2  | 0.02              | 0.4   |
|            |                      |                    | 10                       | 0.08              | 0.8  | 0.025             | 0.025 |
| AE-EP8021  | 5-100 $\mu\text{l}$  | 0.1 $\mu\text{l}$  | 10                       | 0.2               | 2    | 0.1               | 1     |
| AE-TP1202  |                      |                    | 50                       | 0.4               | 0.8  | 0.12              | 0.24  |
|            |                      |                    | 100                      | 0.5               | 0.5  | 0.15              | 0.15  |
| AE-EP8031  | 10-300 $\mu\text{l}$ | 0.5 $\mu\text{l}$  | 30                       | 0.75              | 2.5  | 0.24              | 0.8   |
| AE-TP1203  |                      |                    | 150                      | 1.05              | 0.7  | 0.3               | 0.2   |
|            |                      |                    | 300                      | 1.2               | 0.4  | 0.45              | 0.15  |



Pipette Holder  
Suitable for all pipettes



# Pipette Controller

◆ **Adjustable aspirate liquid and dispense liquid volume.**

Adjustable pipetting volume. No need to staring at the liquid surface.  
Meet your need within a simple touch.

◆ **Light pressing, without pressing switch**

Regular button pressing strength of a normal auxiliary liquid suction device is 1000g.  
Long-time pressing will make fingers tiring. This pipette controller is only 110g.  
A simple light touch will be enough for imbibition, pipetting, dispense, and mix.

◆ **A kind of pipette which can incline to do imbibition and drainage while without influencing the precision**

Pipette can incline to do imbibition and drainage, while no damage will be done to its precision. Different with regular suction device which needs vertical liquid pipette, but complete imbibition, drainage, and separation according to scales.

◆ **Operating space is reduced 50%**

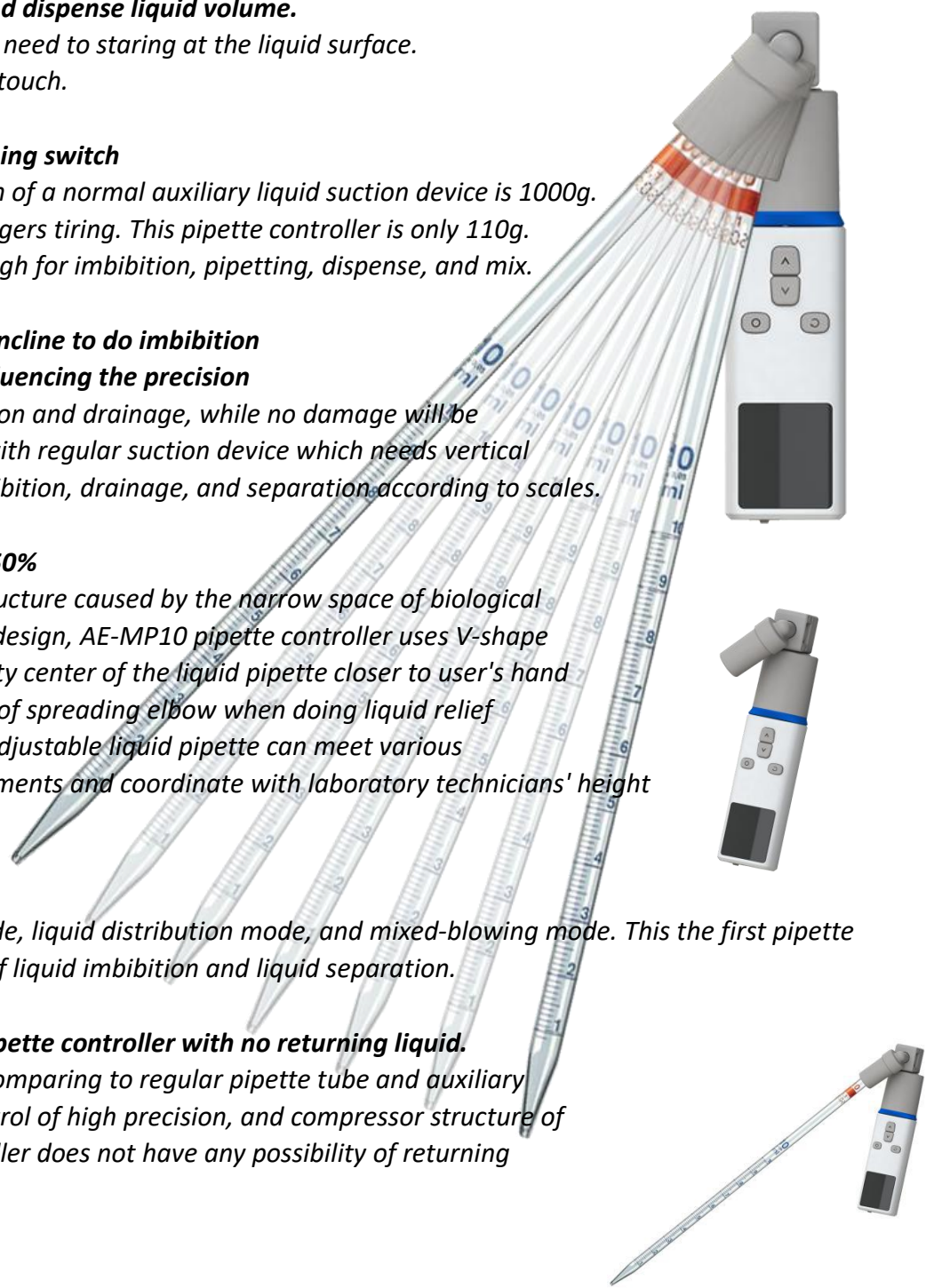
To the unreasonable product structure caused by the narrow space of biological safety cabinet and the U-shape design, AE-MP10 pipette controller uses V-shape structure which makes the gravity center of the liquid pipette closer to user's hand and effectively lower the height of spreading elbow when doing liquid relief and reduces user's tiring level. Adjustable liquid pipette can meet various requirements of different experiments and coordinate with laboratory technicians' height to best condition.

◆ **4 modes, precise pipetting**

Includes free mode, manual mode, liquid distribution mode, and mixed-blowing mode. This the first pipette controller which can set status of liquid imbibition and liquid separation.

◆ **Structure renovation. The pipette controller with no returning liquid.**

With a better structure design comparing to regular pipette tube and auxiliary liquid suction device, motor control of high precision, and compressor structure of accurate positioning, the controller does not have any possibility of returning liquid.



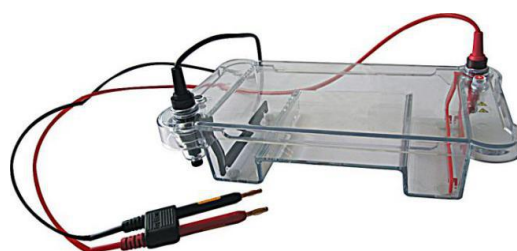
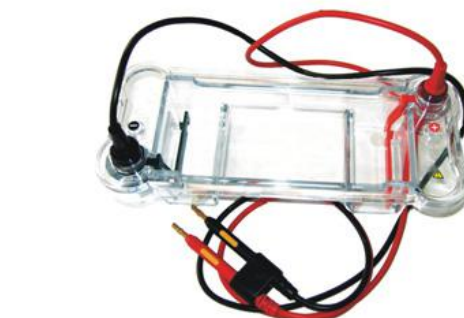
**Technical Specifications:**

| Order Code | Volume Range | Increment | Volume (μl) | Systematic Error |      | Random Error |      |
|------------|--------------|-----------|-------------|------------------|------|--------------|------|
|            |              |           |             | +/-μl            | +/-% | +/-μl        | +/-% |
| AE-MP10    | 10ml         | 100μl     | 1           | 15               | 1.5  | 7.5          | 0.75 |
|            |              |           | 5           | 40               | 0.8  | 12.5         | 0.25 |
|            |              |           | 10          | 50               | 0.5  | 25           | 0.25 |

# Horizontal Electrophoresis Apparatus

AE-subMINI marine electrophoresis is specifically designed for the rapid separation of nucleic acids which can separate and analysis 30 samples within 20 minutes. It also has many unique advantages in DNA fragment recovery experiments. For example, it can be used with different types of electrophoresis buffers, save the buffer, separate the sample rapidly and so on.

| Model                   | AE-subMINI                      |
|-------------------------|---------------------------------|
| Gel Tray Size (W×L)     | 12×12cm                         |
|                         | 12×6cm                          |
|                         | 6×12cm                          |
|                         | 6×6cm                           |
| Comb Specifications     | 6 and 13 well, 0.75mm thick     |
|                         | 8, 11 and 18 well, 0.75mm thick |
|                         | 8 and 18 well, 1.5mm thick      |
|                         | 2 and 3 well, 2.0mm thick       |
| Buffer Capacity         | 800ml                           |
| Tank                    | 1                               |
| All-purpose Glue Device | 1                               |
| Lid and leads           | 1                               |
| Dimensions & Weight     | 35×15×10cm, 1.5kg               |

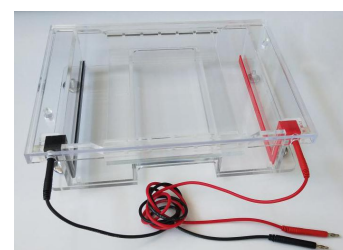


| Model                   | AE-subMIDI                      |
|-------------------------|---------------------------------|
| Gel tray size (W×L)     | 12×12cm                         |
|                         | 12×6cm                          |
|                         | 6×12cm                          |
|                         | 6×6cm                           |
| Comb Specifications     | 6 and 13 well, 0.75mm thick     |
|                         | 8, 11 and 18 well, 0.75mm thick |
|                         | 8 and 18 well, 1.5mm thick      |
|                         | 2 and 3 well, 2.0mm thick       |
| Buffer Capacity         | 800ml                           |
| Tank                    | 1                               |
| All-purpose Glue Device | 1                               |
| Lid and Leads           | 1                               |
| Dimensions (L×W×H)      | 35×15×10 cm, 1.5kg              |

AE-subMIDI sub marine system is durable and light weight thermoformed plastic. Horizontal Electrophoresis Apparatus has removable gel trays constructed of UV-transparent polycarbonate to allow easy viewing of ethidium bromide-stained nucleic acids. The trays separately or in different combinations. Well-forming combs provide choices for making narrow, wide, or preparative wells.

AE-subMAX is specially designed for multi-sample and high-throughput analysis. It greatly facilitate large-scale PCR products which can do 306 samples within the same time and support the 51 hole electrophoresis comb and 8 and 12 volley. The long gel tray of it is the idea choice for Southern blot, Northern blot and RFLP.

| Model               | AE-subMAX                              |
|---------------------|--|
| Item                | Specifications                         |
| Gel tray size (W×L) | 25×20cm                                |
| Comb specifications | 1.0mm thick, 26 teeth; 1.0mm thick, 51 |
|                     | 1.5mm thick, 26 teeth; 1.5mm thick, 51 |
| Buffer capacity     | 2000-2500ml                            |
| Dimensions & Weight | 390×300×100cm, 4kg                     |



AE-caTANK can be used for immune electrophoresis and cellulose acetate membrane electrophoresis. Immune electrophoresis is a qualitative method for the analysis of the antigen composition and it is a combination of gel electrophoresis and double agar diffusion. Cellulose acetate membrane (CAM) is a simple, rapid separation of biomolecules and the most widely used is the serum protein CAM electrophoresis.

| Model                      | AE-caTANK   |
|----------------------------|---|
| Item                       | Specifications  |
| Platinum electrodes Immune | three electrodes(one negative and two for 1 to 20 slides) |
| Comb Specifications        | 2×8cm, can be used for 1 to 24                            |
|                            | 7×9cm, can be used for 1 to 6                             |
|                            | 8×12cm, can be used for 1 to 6                            |
| Composition                | tank, swim clubs, latex tube and power cord               |
| Dimensions & Weight        | 296×266×122mm, 4kg  |



# Vertical Electrophoresis Tank

## Features

AE-transBLOT mini-transfer core can do small gel transfer experiments clipping and high quality. It consists of thermal and elastic polycarbonate injection molding, built-in cooling unit which can quickly absorb the heat transfer process and the limit function and the color difference can ensure the transfer process orientation.

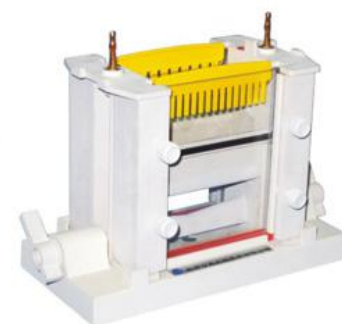
|                    |  |
|--------------------|--|
| Model              | AE-transBLOT   |
| Transfer size(W×L) | 95×110mm   |
| Transfer quantity  | 1~2  |
| Use                | 1~3 hours by high current or overnight transfer by 50~60mA |
| Recommended Power  | AE-Power600/600i/300                                       |
| Net weight         | 1kg  |



## Features

The AE-verMINI cell is dual vertical electrophoresis system performs vertical gel electrophoresis on mini-format gels. The basic unit includes electrophoresis modules, casting stand and glass plates with permanently bonded gel spacers that simplify hand casting and eliminate leaking during casting, Each module holds one gel sandwich, 10 cm wide and up to 10.5 cm long. One gel can be cast in place on each electrophoresis module.

|                           |   |
|---------------------------|---|
| Model                     | AE-verMINI  |
| Dimensions ( LxWxH)       | 160x150x160mm   |
| Gel size (WxH)            | Standard configuration: 83x97mm Optional: 83x73mm   |
| Prefabricated plastic     | Compatible with Pierce, Invitrogen and Bio-rad precast gels                                   |
| Glue quantity             | 1 to 2  |
| On slot buffer            | 200ml   |
| The following slot buffer | 800ml   |
| Comb specifications       | 1.0mm thick, 9, 10, 15 and 18 well; 0.75mm thick, 10 and 15 well; 1.5mm thick, 10 and 15 well |
| Recommended Power         | AE-Power600/600i/300  |
| Net weight                | 2.5kg   |



United Status Patent

## Features

AE-verMIDI is suitable for polyacrylamide protein, nucleic acid electrophoresis and the second dimensional of two-dimensional electrophoresis. It built-in cooling channel and you can add the AE-chillerE05 thermostatic circulator to achieve the purpose of precise temperature control. The hand plastic irrigation system is simple, convenient and user-friendly, it makes electrophoresis experiments become a pleasure.

|                       |  |
|-----------------------|--|
| Model                 | AE-verMIDI   |
| Prefabricated plastic | Compatible with Pierce and Invitrogen precast gels |
| On slot buffer        | 250~300ml  |
| The following slot    | 800~1200ml   |
| Cooling chamber       | 400ml  |
| Standard              | 12,16,20 and 24 well,1.0mm thick                   |
| Recommended Power     | AE-Power600/600k                                   |
| Dimensions ( L×W×H)   | 190×150×190mm                                      |



# Vertical Electrophoresis Tank

## Features

AE-verBLOT mini vertical transfer electrophoresis with the ice box can do small gel transfer experiments clipping and high quality which consists of thermal and elastic polycarbonate injection molding and can place two transfer folders. Using which BG-verMINI can transfer of proteins to nitrocellulose filter membrane or polyvinylidene fluoride easily.

| Model              | AE-verBLOT       |
|--------------------|------------------|
| Dimensions ( L×W   | 160×150×200mm    |
| Transfer size ( W× | 9.5×11cm         |
| Transfer tank      | 1                |
| Sponge gasket      | 4                |
| Transfer folder    | 2                |
| Buffer capacity    | 800ml            |
| Recommended        | AE-Power600k and |
| Net weight         | 1.5kg            |



## Features

AE-verSEQUENCING (W) can separate DNA and RNA fragments with one nucleotide difference well. It is suitable for SSCP, microsatellite analysis, oligonucleotide separation and so on. Its unique thermal design can maintain a balanced temperature, and eliminate the phenomenon of "Smile" and the outfall located in the sealing of the upper buffer chamber can be discharged buffer.

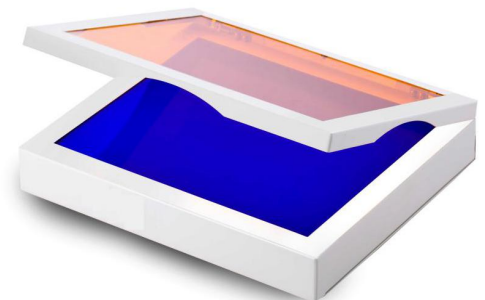
| Model             | AE-verSEQUENCING(W)          |
|-------------------|------------------------------|
| Gel area (W x L): | 345×300mm                    |
| The shark-tooth   | 0.4mm thick, 68 and 100 well |
| Buffer capacity   | up to 1000ml                 |
| Recommended       | AE-Power3500                 |
| Dimensions        | 46×16×36cm                   |



# Blue Light Transilluminator

## AE-Vtrans520

- Safe: visible light instead of ultraviolet light and EB
  - Sensitive: can detect the DNA of dozens pg by using with new nucleic acid dye •GeneFinder™ and SYBR Green. Its sensitivity is 5-10 times higher than the EB.
  - Suitable for most fluorescent dyes: GeneFinder™, Fluorescein, SYBR Green, Gelstar, SYPRO Orange, Green Fluorescent Protein, etc.
- 470nm blue light transmission source, made of 488 LED lights, no damage to human body and samples.



Large size: 200x250mm



# Electrophoresis Power Supply

| Model   | AE-POWER300                         | AE-POWER600 | AE-POWER600i        | AE-POWER600K |
|---|-------------------------------------|-------------|---------------------|--------------|
| Voltage   | 5-300V                              | 5-600V      | 5-600V              | 5-600V       |
| Current   | 1-500mA                             | 1-500 m A   | 1-300m A            | 1-1000 m A   |
| Power.  | 1-150W                              | 1-300W      | 1-180W              | 1-300W       |
| constant voltage, constant current and constant power                                   |                                     |             | Yes                 |              |
| Micro-current state function  |                                     |             | Yes                 |              |
| Timer   |                                     |             | 1min-99h59min       |              |
| Pause / Resume function   |                                     |             | Yes                 |              |
| Microcomputer switching power supply  |                                     |             | LCD                 |              |
| Display   |                                     |             | Yes                 |              |
| Programmable method   |                                     |             | Yes                 |              |
| Stores single-step 12 program   |                                     |             | Yes                 |              |
| Automatically generates   |                                     |             | Yes                 |              |
| Leakage protection  |                                     |             | Yes                 |              |
| Automatic recovery after power failure  |                                     |             | Yes                 |              |
| The monitoring of over-voltage, arc, no-load, mutation load, overload and short circuit |                                     |             | Yes                 |              |
| Operating environment   | Temperature 0-40 °C, Humidity 0-95% |             |                     |              |
| 4 jack on the parallel  |                                     |             | Yes                 |              |
| Input voltage   |                                     |             | 90-260VAc , 50/60Hz |              |
| Dimensions (L×W×H)  |                                     |             | 33×22×8cm           |              |
| Net weight  |                                     |             | 3.5Kg               |              |



AE-POWER300



AE-POWER600 series



AE-POWER3500



AE-Power500HC

| Model   | AE-Power600h                        | AE-Power3500  | AE-Power500HC |
|---|-------------------------------------|---|---------------|
| Voltage   | 5-600V                              | 5-3500V   | 10-500V       |
| Current   | 1-1000 m A                          | 1-400mA   | 0.01-3.0 A    |
| Power   | 1-300W                              | 1-400W  | 1-500W        |
| constant voltage, constant current and constant power                                   |                                     | Yes   |               |
| Microcomputer switching power supply  |                                     | Yes   |               |
| Timer   |                                     | 1min-99h59min   |               |
| Pause / Resume function   |                                     | Yes   |               |
| Display   | LCD                                 | High-resolution backlit, 128 × 64 pixel graphical LCD |               |
| Programmable method   |                                     | Yes   |               |
| Can store 12 programs   |                                     | Yes   |               |
| Automatically generates   |                                     | Yes   |               |
| Micro-current state   |                                     | Yes   | --            |
| Leakage protection  |                                     | Yes   |               |
| Automatic recovery after power failure  |                                     | Yes   |               |
| The monitoring of over-voltage, arc, no-load, mutation load, overload and short circuit |                                     | Yes   |               |
| Operating environment   | Temperature 0-40 °C, Humidity 0-95% |   |               |
| 4 jack on the parallel  |                                     | Yes   |               |
| Input voltage   |                                     | 90-260VAc 50/60HZ                                     |               |
| Dimensions (L×W×H)  | 32×22×8cm                           |   | 32×27×10cm    |
| Net weight  |                                     | 3.5Kg   | 4.5Kg         |

# Gel Imaging Analysis System

◆ Industrial LCD  
◆ Touchscreen

**Gel Image Analysis software**

- ◆ Image collection
- ◆ Image processing
- ◆ Data analysis
- ◆ Report management

◆ Strong UV light  
312nm x 8pcs

◆ Large size loading platform to meet more experimental needs (250x200mm)

◆ Active pixels: 2592 × 1944(5 million)  
◆ Pixel size: 5.2μm × 5.2μm  
◆ Signal to noise ratio: 56dB

◆ Japanes brand lens, big aperture

◆ Multilayer coating UV/IR 590nm

◆ Industrial motherboard  
◆ 128G solid, 4G memory  
◆ Win7 system  
◆ Highly programmed control  
◆ Auto-off without operation for 15 minutes

◆ UV/Incandescent conversion board (260x210mm)

◆ Professional gel cutting device

◆ Small size, save the space  
◆ Plug to operate, free installation  
◆ Avoid device compatibility issues

## Technical Specifications

| Model  |  | AE-gdsAUTO320  | AE-gdsAUTO520           |
|--|--|--|-------------------------|
| Camera   | Resolution   | 1280×1024(1.31 million)  | 2592×1944(5.03 million) |
|  | Pixel size   | 5.2μm×5.2μm  |                         |
|  | Signal to noise ratio  | 56dB   |                         |
| Lens   | Detection sensitivity  | Nucleic acid as low as 20pg  |                         |
|  | Electric lens  | High transparency automatic zoom lens, F1.2, 8-48mm  |                         |
| Light source   | Filter   | Professional grade coating filter UV/IR 590nm, optional: 535/605/699nm   |                         |
|  | Light intensity  | up to 1000 microns /m <sup>3</sup>   |                         |
|  | Lighting mode  | uv transmission, white light transmission (uv conversion white plate), white light reflection  |                         |
|  | Excitation light source  | transmission: 312nm (optional 254nm and 365nm)   |                         |
|  | Bilateral reflection   | LED reflection white light lamp  |                         |
|  | UV transmission area   | 200×250mm  |                         |
|  | Visible light transmission area  | 210×260mm  |                         |
|  | Equipped with glue cutting device  | drawer type sample storage platform, the line of sight is 90° with the sample, which can protect the operator and facilitate the operation of glue cutting |                         |
|  | Timed shutdown   | turn off the uv light source for 15 minutes without operation, effectively extending the service life of the uv lamp and the uv glass                      |                         |
|  | All-in-one machine design  | it can be controlled by computer or cabinet panel, and can fully control zoom, focus, aperture, transmission ultraviolet lamp and reflection lamp          |                         |
|  | Airborne display screen  | 12.1-inch industrial control touch LCD   |                         |
|  | Analysis software  | customized software Baygene Gel Image Analysis   |                         |
|  | All-in-one machine design: it can be controlled by computer or cabinet panel, and can fully control zoom, focus, aperture, transmission ultraviolet lamp and reflection lamp |  |                         |
| High-performance low-power I3 processor, dual-core four-thread 1.8g, solid state drive 128G, 4G memory, Windows10 system |  |  |                         |
| With standard Internet port, USB, COM, VGA, keyboard and mouse, no need to have a computer                               |  |  |                         |



# Adjustable Blue Light Gel Imaging Analysis System

## Application

The integrated gel imaging analysis system designed for blue light detection and analysis can realize detection, imaging and analysis storage functions without any external device. Compatible fluorescent dyes are GeneFinder™, GeneGreen, GelRed, GelGreen, SYBR Green I, SYBR Safe, Goldview, SYBR Gold, SYPRO Ruby, SYPRO Orange, SYPRO Tangerine, eGFP, Cy2, FITC, etc.



## Features

- An integrated gel imaging analysis system designed for blue light detection and analysis, which can realize detection, imaging and analysis storage functions without any external device.
- The blue light excitation source is adjustable, and the light intensity can be selected according to the concentration of the sample to avoid over-exposure or too weak of the sample.
- The blue light intensity is evenly distributed and the 488 LED lights inside the blue light transmittance are evenly arranged to ensure the imaging quality.
- Use visible light source, avoid the use of highly toxic EB, avoid uv damage and damage to samples, effectively protect the experimenter, experimental samples and the environment.

## Technical Specifications

| Model  |  | AE-gdsAUTO 550  |
|--|--|---|
| Camera   | Resolution   | 2592×1944(5.03 million)   |
|  | Pixel size   | 5.2μm×5.2μm   |
|  | Signal to noise ratio  | 56dB  |
| Lens   | Electric lens  | High transparency automatic zoom lens, F1.2, 8-48mm   |
|  | Filter   | Professional grade coating filter UV/IR 590nm, optional: 535/605/699nm  |
|  | Lighting mode  | blue light transmission and reflection of white light   |
|  | Excitation light source  | transmission: 470nm   |
|  | Bilateral reflection   | LED reflection white light lamp   |
|  | Transmission area  | 210×260mm   |
|  | Timed shutdown   | shut off the blue light source without operation for 15 minutes, effectively extending the service life of the light source                       |
|  | All-in-one machine design  | it can be controlled by computer or cabinet panel, and can fully control zoom, focus, aperture, transmission ultraviolet lamp and reflection lamp |
|  | Airborne display screen  | 12.1-inch industrial control touch LCD  |
|  | High-performance low-power I3 processor, dual-core four-thread 1.8g, solid state drive 128G, 4G memory, Windows10 system |   |
| With standard Internet port, USB, COM, VGA, keyboard and mouse, no need to have a computer |  |   |
| Analysis software: customized software Gel Image Analysis                                  |  |   |

# Electrophoresis & Transilluminator AE-subMIDI(V)

- **Real-time observation:** Observation the nucleic acid while electrophoresis experiment
- **Low heat long lift:** Semiconductor light-emitting technology
- **Multi-purpose device:** Electrophoresis tank + visible light Transilluminator
- **Multi-purpose slot:** 60mm×60mm, 60mm×120mm, 120mm×60mm, 120mm×120mm

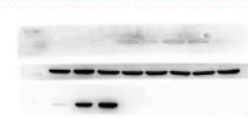
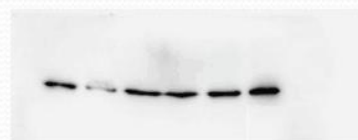


# Mini Chemiluminescence imaging system

- ◆ High-resolution refrigeration CCD with high visibility
- ◆ Resolution: 3488x2574, pixel size: 4.5x4.5um
- ◆ The cooling temperature up to R.T-75°C
- ◆ Photosensitivity >75%, more conversion ability
- ◆ F/0.9 large aperture fixed-focus lens, large amount of light, improve detection sensitivity
- ◆ LED lights on both sides
- ◆ Three shooting modes: single, multiple, manual; And signal overlay
- ◆ Automatic/manually merge Marker and sample images
- ◆ Rich image post-processing functionality
- ◆ Support report printing / PDF / Word output
- ◆ Database report management, convenient for many users
- ◆ Easy to operate, free software upgrade for life



## Practical example



## Technical Specifications

| Model                     | AE-gdsAUTO 710 MINI   |
|---------------------------|---|
| Camera                    | Imported high resolution low illumination digital refrigeration camera  |
| Resolution                | 2750×2200 (6.05 million)  |
| Pixel size                | 4.54 microns × 4.54 microns   |
| Pixel density             | 16bit   |
| Pixel merge               | 1×1, 2× 2, 4 ×4   |
| CCD photosensitive chip   | SONY ICX 694  |
| CCD dark current          | < 0.0005e-/pixel/ SEC @-40°C  |
| Readout noise             | ≥62dB   |
| Photosensitive efficiency | >75%  |
| Cooling mode              | Semiconductor refrigeration   |
| Cooling temperature       | Relative temperature -75°C<br>(Absolute temperature -55°C, dynamic real-time display CCD refrigeration temperature)     |
| Lens                      | F/0.8, high resolution, large aperture and high permeability fixed focus lens   |
| Zoom                      | Compatible with shooting sample thickness of 0.1-10mm   |
| Dynamic range             | >4.5 orders of magnitude  |
| Lighting source           | LED light source on both sides  |
| Shooting area             | 15×15cm   |
| Overall size (L×W×H)      | 320×360×550mm   |
| Software                  | Chemiluminescence professional photo taking software, easy to switch between Chinese and English, free upgrade for life |

# Fluorescence imaging system

◆ High-resolution refrigeration CCD with high visibility

◆ Resolution: 3488x2574, pixel size: 4.5x4.5um

◆ The cooling temperature up to R.T-75°C

◆ Photosensitivity >75%, more conversion ability

◆ F/0.9 large aperture fixed-focus lens, large amount of light, improve detection sensitivity

◆ Three shooting modes: single, multiple, manual; And signal overlay

◆ Automatic/manually merge Marker and sample images

◆ Rich image post-processing functionality

◆ Support report printing / PDF / Word output

◆ Database report management, convenient for many users

◆ Easy to operate, free software upgrade for life

◆ 460, 535, 590, 620, 699nm light filter

◆ light source on both sides: red, green, blue, near infrared

◆ UV light box 312nm, large size, strong light

## Technical Specifications

| Model                                  | AE-gdsAUTO 720   | AE-gdsAUTO 730   |
|--|--|--|
| Camera                                 | Imported high resolution low illumination digital refrigeration camera                                     |  |
| Resolution                             | 2750×2200 (6.05 million)   |  |
| Pixel size                             | 4.54 microns × 4.54 microns  |  |
| Pixel density                          | 16bit  |  |
| Pixel merge                            | 1×1, 2×2, 4×4  |  |
| CCD photosensitive chip                | SONY ICX 694   |  |
| CCD dark current                       | <0.0005e/p/s@-40°C   |  |
| Readout noise                          | ≥62dB  |  |
| Photosensitive efficiency              | >75%   |  |
| Cooling mode                           | Semiconductor refrigeration  |  |
| Cooling temperature                    | Relative temperature -75°C (absolute temperature -55°C, dynamic real-time display CCD cooling temperature) |  |
| Lens                                   | F/0.8, high resolution, large aperture and high permeability fixed focus lens                              |  |
| Zoom                                   | Compatible with shooting sample thickness of 0.1-10mm  |  |
| Dynamic range                          | >4.5 orders of magnitude   |  |
| Six electric filter wheels             | Standard 590nm filter  | with 460nm, 535nm, 620nm, 590nm, 700nm filters, also customizable                  |
| Transmission light source              | 312nm  |  |
| Reflection light source                | UV254nm, UV365nm (optional)  |  |
| White light on both sides              | 12V cold light source  |  |
| Side emission fluorescence             | ---  | Equipped with professional uv to white plate<br>red 620nm, green 530nm, blue 470nm |
| UV transmission area                   | 20×20cm  |  |
| Transmission area of uv to white plate | 26×21cm  |  |
| UV reflection area                     | 15cm×5cm   |  |
| Chemiluminescence area                 | Chemiluminescence imaging area: 15×18cm  | Chemiluminescence shooting area: 15×18cm   |
| Overall size(L×W×H)                    | 410×440×660mm  |  |
| Software                               | Professional photo software, Chinese/English arbitrary switch, easy to operate, free upgrade for life      |  |

# Portable Incubator

## Features

The portable incubator AE-PI-100 is designed for personal uses in storing and incubating samples at temperature ranging from 5°C to 60°C.

The incubator employed the sophisticated Peltier technology with capable of heating and cooling. The temperature resolution is 1°C; ±0.2°C accuracy; and ±0.2°C stability.

The incubator can be carried out and plug into the car cigarette outlet.

## Technical Specifications

| Model                            | AE-PI-100                              |
|----------------------------------|--|
| Temp. Range                      | 5°C to 60°C                            |
| Temp. Accuracy                   | ±1°C                                   |
| Temp. Uniformity                 | ± 0.5°C                                |
| Temp. Stability                  | ±0.2°C                                 |
| Temp. Increment                  | 1°C                                    |
| Selection on Heating and Cooling | Automatically Detected                 |
| Calibration Capable              | Yes                                    |
| Portability                      | handle and Car Cigarette Plug included |
| Platform Dimensions              | 27.5×18.5 cm                           |
| Internal dimensions (W×D×H)      | 19×27×35cm                             |
| External Dimensions (W×D×H)      | 29.5×35×46.5 cm                        |
| Capacity                         | 18L, (0.68 cu. ft.)                    |
| Weight                           | 6.0 kg/13Lbs                           |
| Electrical                       | 100 to 240V, 50-60Hz, 60 W             |
| Operating environment            | 4°C (cold room) to 60°C                |
| Limited Warranty                 | 1 year                                 |

Products are CE complied.



# Portable centrifuge

## Application

TD4Y low speed centrifuge is portable design and has low noise. It is popular with clinic, research and university.

## Technical performance

- Microcomputer control, brushless motor.
- It is programmable and has LED display.
- It has speed/RCF switch easily.
- There are lid safety device, speed safety device, errors detection.
- ABS housing make the clean easy.
- Silastic sealed ring comfort to GMP US FDA certificated.



## Specification

| Model               | TD4Y                 |
|---------------------|----------------------|
| Max Speed           | 4000r/min            |
| Max RCF             | 1980×g               |
| Max Capacity        | 15mlx6               |
| Speed Accuracy      | ±30r/min             |
| Time Setting        | 1min-99min           |
| Noise               | <65dB(A)             |
| Power Supply        | 110V/60Hz, 220V/50Hz |
| Dimension(LxWxH)    | 310mm×260mm×220mm    |
| Packing Size(LxWxH) | 370mm×320mm×280mm    |
| Net Weight          | 14kg                 |

## Rotor

|      |  |   |
|------|--|---|
| No.1 |  | Rotor Capacity: 7ml×12<br>Max Speed: 4000r/min<br>Max RCF: 1980×g |
| No.2 |  | Rotor Capacity: 15ml×6<br>Max Speed: 4000r/min                    |



# Tabletop Low Speed Centrifuge

## Technical performance

- Microcomputer control, DC brushless motor, stable operation, low noise and high speed accuracy.
- Touch panel, programmable operation, operation data can be set according to demands and stored automatically.
- LED or LCD display, user-friendly interface, simple and convenient operations.
- The real-time conversation of Speed and RCF s convenient for operation.
- It has self-locking device, lid safety device, over-speed safety device, and automatic alarm device, etc.
- Silastic sealed ring comfort to GMP US FDA certificated.

## Application

Tabletop Low Speed Centrifuge is widely used in the field of clinical medicine, biochemistry, genetic engineering, immunology, etc. It applies to hospitals, scientific research units, colleges and universities for centrifugal separation.

## Specification

| Model               | AE-TD4              | AE-TD5              |
|---------------------|---------------------|---------------------|
| Max Speed           | 4000r/min           | 5000r/min           |
| Max RCF             | 2500xg              | 4390xg              |
| Max Capacity        | 20mlx12             | 15mlx32             |
| Speed Accuracy      | ±30r/min            | ±30r/min            |
| Time Setting        | 1min-99min          | 1min-99min          |
| Noise               | <60dB(A)            | <65dB(A)            |
| Power Supply        | 110V/60Hz,220V/50Hz | 110V/60Hz,220V/50Hz |
| Dimension(LxWxH)    | 330mm×420mm×280mm   | 460mm×540mm×340mm   |
| Packing Size(LxWxH) | 430mm×520mm×390mm   | 550mm×630mm×430mm   |
| Net Weight          | 14kg                | 28kg                |





# Tabletop High Speed Centrifuge

## Technical Performance

- Microcomputer control. DC brushless motor, stable operation, low noise and high speed accuracy.
- Touching panel, programmable operation. The operation data can be set according to demand and stored automatically.
- LED digital display, user-friendly interface, simple and convenient operations.
- The real-time conversation of Speed and RCF is convenient for operation.
- It has self locking device, over-speed safety device, and automatic alarm device, etc.
- Silastic sealed ring comfort to GMP, US FDA certificated.

## Application

TG16A tabletop high speed centrifuge have the small size and low noise. It is the essential equipment of centrifugal separation used by hospitals, scientific research units and institutions for higher learning.

## Specification

| Model               | AE-TG16A            |
|---------------------|---------------------|
| Max Speed           | 16000r/min          |
| Max RCF             | 17800×g             |
| Max Capacity        | 5mlx10              |
| Speed Accuracy      | ±30r/min            |
| Time Setting        | 1min-99min          |
| Noise               | <65dB(A)            |
| Power Supply        | 110V/60Hz,220V/50Hz |
| Dimension(LxWxH)    | 230mm×310mm×240mm   |
| Packing Size(LxWxH) | 290mm×400mm×330mm   |
| Net Weight          | 9kg                 |



## Rotor

|   |  |   |  |
|---|--|---|--|
| <p>No.1</p>  | <p>Rotor<br/>Capacity:1.5ml/2.2mlx12<br/>Max Speed:16000r/min<br/>Max RCF:17800xg<br/>Adapters:0.2ml 0.5ml</p> | <p>No.2</p>  | <p>Rotor<br/>Capacity:5mlx10<br/>Max<br/>Speed:13000r/min<br/>Max RCF:11400xg<br/>Adapters:0.5ml</p> |
| <p>No.3</p>   | <p>Rotor<br/>Capacity:1.5ml/2.2mlx18<br/>Max Speed:13200r/min<br/>Max RCF:16110xg<br/>Adapters:0.2ml 0.5ml</p> |   |  |

# High-Speed Micro Refrigerated Centrifuge

## Technical performance

- This multipurpose centrifuge has advanced and intelligent technology.
- Microcomputer control, LCD large touch screen
- Rotor automatic recognition
- It has 9 tiles of acceleration and deceleration level for your choice
- New electronical lock ensure the safety spin. There are over-speed safety device.
- Over-temperature safety device and automatic alarm deice
- Pre-programmed option and memory storage function
- Silastic sealed ring comfort to GMP US FDA certifticled

## Specification








| Model                | AE-TGL-17M                             | AE-TGL-16.5M |
|----------------------|--|--------------|
| Max Speed            | 17000r/min                             | 16500r/min   |
| Max RCF              | 21532×g                                |              |
| Max Capacity         | 1.5ml/2.2ml×36                         |              |
| Speed Accuracy       | ±30r/min                               |              |
| Time Setting         | 1min-99h59min                          |              |
| Tempreature Setting  | -20~+40℃                               |              |
| Tempreature Accuracy | ±1℃                                    |              |
| Compressor Uniit     | French Tecumseh Compressor Unit R 134a |              |
| Noise                | <65dB(A)                               |              |
| Power Supply         | 110V/60Hz,220V/50Hz                    |              |
| Dimension(LxWxH)     | 280mm×540mm×300mm                      |              |
| Packing Size(LxWxH)  | 480mm×670mm×585mm                      |              |
| Net Weight           | 30kg                                   |              |



## Application

It is widely used in the field of clinical medicine, biochemistry, genetic engineering and immunology etc. It is the essential equipment for hospitals, scientific research lab special for micro-tubes and PCR.

## Rotor

|   |   |   |  |
|---|---|---|--|
| <p>No.1</p>  | <p>Rotor Capacity: 1.5ml×12<br/>Max Speed: 17000/16500r/min<br/>Max RCF: 192250/18360×g<br/>Adapters: 0.2ml 0.5ml</p> | <p>No.2</p>  | <p>Rotor Capacity: 5ml×12<br/>Max Speed: 12000r/min<br/>Max RCF: 10142×g<br/>Adapters: 0.5ml 1.5ml</p>         |
| <p>No.3</p>  | <p>Rotor Capacity: 1.5ml/2.2ml×24<br/>Max Speed: 15000r/min<br/>Max RCF: 21532×g<br/>Adapters: 0.2ml 0.5ml</p>        | <p>No.4</p>  | <p>Rotor Capacity: 1.5ml/2.2ml×36<br/>Max Speed: 12000r/min<br/>Max RCF: 13813×g<br/>Adapters: 0.2ml 0.5ml</p> |
| <p>No.5</p>  | <p>Rotor Capacity: 0.5ml×48<br/>Max Speed: 12000r/min<br/>Max RCF: 10920×g</p>  | <p>No.6</p>  | <p>Rotor Capacity: 3×8×0.2ml for PCR<br/>Max Speed: 15000r/min<br/>Max RCF: 13800×g</p>                        |
| <p>No.7</p>  | <p>Rotor Capacity: 0.5ml×18<br/>Max Speed: 16000r/min<br/>Max RCF: 15300×g</p>  |   |  |

# Mini-Plate Centrifuge

## Application:

Mini-Plate Centrifuge is the first one adopted an unique design for the horizontal rotor centrifuge (Patented) in the world. The plate or tubes set into the rotor with 2pcs slope-rotor-shelf. It can quickly spin down droplets and condensation and is for use before and after thermal cycling to improve PCR yield and other tests. The MPC-22 combines functionality, easily operation and comfort – a lot of “high” qualities to come standard in one compact micro-centrifuge

## Specification:

| Model       | MPC-22  |
|-------------|---|
| Capacity    | 2pcs PCR plates with skirt or without skirt / Elisa plates<br>8x0.2ml PCR strip tubes/<br>0.2ml PCRtube |
| Rotor Speed | 2200rpm   |
| G Force     | 480xg   |
| Timer       | 0-10min   |
| Dimensions  | 290x360x140   |
| Weight      | 3.6kg   |
| Power       | AC120V/220V, 50-60Hz  |



# High-Speed Mini-Centrifuge

## Features:

1. Extremely quiet. Low noise levels.
2. LCD display. Easy-to-follow digital display.
3. Capacity: 12 x 1.5/2.0ml tubes.
4. Separate short-spin key.
5. Low sample heating (only 12°C after 30 min, at max. speed).
6. Autoclavable rotor (121 deg.C, 20min).
7. RMP/RCF setting as required.
8. Includes standard rotor made of anodized aluminum.
9. Timer can be set up to 99min.
10. The small size of the unit makes it convenient for use on the bench, under a hood or in refrigerated environments.



## Specification:

| Type                             | MC-14                |
|----------------------------------|----------------------|
| Max. rotational speed            | 14,500 rpm/min       |
| Relative centrifugal force (RCF) | 14,000xg             |
| Timer                            | 20 sec---99min       |
| Acceleration time to max. speed  | 15s                  |
| Braking time from max. speed     | 15s                  |
| Dimensions in cm (WxDxH)         | 24x21.2x13.8         |
| Power requirement                | 105W                 |
| Power supply                     | 100V or 240V 50/60Hz |

## Rotor and accessories:

1. High-strength transparent plastic cover.
2. Rotor can be autoclavable (121 °C, 20min).
3. Optional adapter accessory ---- 0.2ml PCR tube adapter ---- 0.5ml PCR tube adapter.

# Mini-Centrifuge

## Applications:

MC-4/6 Series Mini-Centrifuge is compact and cost effective, allowing any workstation to be equipped with a "personal" mini centrifuge. It includes 2 quick release interchangeable rotors, two speed options (4,000rpm & 6000rpm). The electronic brake can reach quick deceleration to reduce handling time.

## Specification

| Type              | MC-4/6-1  | MC-4/6-2  | MC-4/6-3   |
|-------------------|---|---|--|
| Capacity          | 8x1.5/2.0ml tube rotor<br>4 place PCR strip rotor | 6x1.5/2.0ml<br>6x0.5ml tubes<br>2-8x0.2ml PCR strip rotor | 48well 50ul PCR plate rotor<br>4x5ml Eppendorf-tubes rotor |
| Two Speed Options | 4,000rpm & 6,000rpm                               |   |  |
| Max. RCF          | 1,200xg (4000rpm)<br>2,000xg (6000rpm)            | 1,000xg (4000rpm)<br>2,000xg (6000rpm)                    | 1,000xg (4000rpm)<br>2,000xg (6000rpm)                     |
| Dimensions        | 135x147x107mm                                     |   |  |
| Weight            | 1kg   |   |  |
| Power Supply      | AC 100-240V, 50/60Hz                              |   |  |



# Mini-Centrifuge

## Applications:

The MC-6,MC-7,MC-10 is available with some different rotor configurations. The strip tube model holds two 8x0.2ml PCR strip tubes or 16 individual 0.2ml tubes. The standard model accommodates 6x1.5/2.0ml tubes directly and smaller tubes with adapters. Both 0.5ml and 0.2ml adapters are supplied with the standard unit. Operation of the centrifuge begins when the lid is closed. The rotor is quickly accelerated to 6000/7200rpm. Upon opening the lid, the rotor comes to a stop.

## Technical Specifications:

| Type                             | MC-6  | MC-7   | MC-10                   |
|----------------------------------|---|--|-------------------------|
| Relative Centrifugal force (RCF) | 2000xg  | 2300xg   | 5000xg                  |
| Max. Rotational Speed            | 6,000rpm  | 7,000rpm   | 10,000rpm               |
| Rotors                           | 6x1.5/2.0ml angle rotor<br>2-8x0.2ml strip rotor<br>Rotor for slide | 6x1.5/2.0ml angle rotor<br>2-8x0.2ml strip rotor | 6x1.5/2.0ml angle rotor |
| Maximum noise                    | ≤50Db   |  |                         |
| Power Requirement                | 30W   | 30W  | 40W                     |



# Colorful Touch Screen Melting Point Device

## Key Features

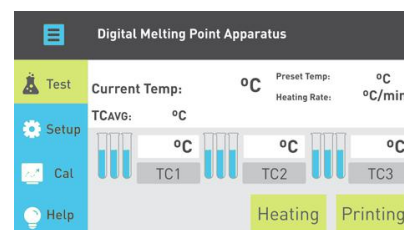
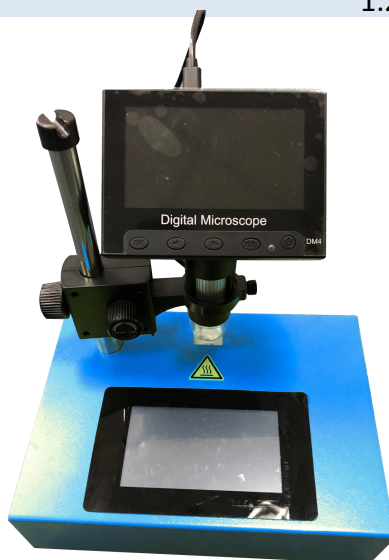
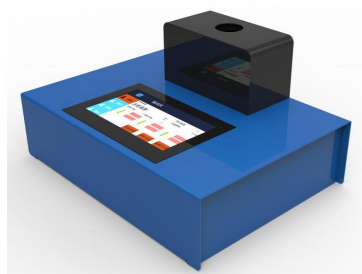
- Colorful Touch Screen Display.
- Increase Temperature can easy setting from 0.1 to 10°C/min.
- One time can test 3 samples. Temperature can reach to 400°C.
- High resolution microscope lenses can observe sample clearly.
- Built-in cooling fan can easy cool down temperature and test next samples.
- PID control temperature, fully closed design of furnace body to avoid any empyrosis for the user.

## Applications

Melting point device is widely using in chemical industry and medicine. It is a necessary instrument for the production of food, drugs, spices, dyes and other organic crystal substances.

## Technical Specifications

| Model                      | DMP-800  | DMP-600        | DMP-200                       | DMP-100        |
|----------------------------|--|----------------|-------------------------------|----------------|
| Temperature Range          | RT-400°C   | RT- to 320°C   | RT-400°C                      | RT- to 350°C   |
| Cooling Function           | Built-in cooling fan   | NO             | Built-in cooling fan          | NO             |
| Microscope video function  | NO   | NO             | YES                           | YES            |
| PC Software                | NO   | NO             | YES                           | NO             |
| Sample Cell                | Capillary tube   | capillary tube | Capillary tube or slide glass | Capillary tube |
| Resolution                 | 0.1°C  |                |                               |                |
| Temperature Increase Speed | 0.1°C-10°C (100 temperature point infinitely adjustable)     |                |                               |                |
| Temperature Control Method | PID control temperature, fully closed design of furnace body |                |                               |                |
| Accuracy                   | ±0.4°C(<250°C), ±0.7°C(>250°C)                               |                |                               |                |
| Repeatability              | When 0.1°C/Min, repeatability ±0.3°C                         |                |                               |                |
| Display                    | Colorful Touch Screen  |                |                               |                |
| Output                     | RS232 interface  |                |                               |                |
| Sample Tube                | external diameter φ1.6mm, internal diameter :φ1.2mm          |                |                               |                |
| Voltage                    | 100V-240V, 50HZ-60HZ   |                |                               |                |
| Power                      | 100W   |                |                               |                |
| Size                       | 250mm*250mm*150mm  |                |                               |                |
| Weight                     | 1.2kg  |                |                               |                |





# Digital Homogenizer

## Technical Specifications:



|  |                              |
|--|------------------------------|
| Rated Voltage                                  | AC220V/AC110V                |
| Rated Frequency                                | 50/60Hz                      |
| Input Power                                    | 850W                         |
| Output Power                                   | 500W                         |
| Rated Torque                                   | 17.1N.cm                     |
| Word Mode                                      | S1 (continuous)              |
| Operation Control Mode                         | Combined control knob        |
| Rotating Speed Adjustment Range (idle running) | 2000-2800rpm                 |
| Rotating Speed Control Type                    | Stepless                     |
| Speed Digital Display                          | LED                          |
| Timing Control Range                           | 1-1000min                    |
| Dynamic Speed Detection Function               | YES                          |
| Speed Memory Function                          | YES                          |
| Overload Protection Function                   | YES                          |
| Peak Torque of The Stirring Head               | 17.0 N.cm                    |
| Stirring Head Material                         | AISI 316                     |
| Stirring Head Specifications                   | 12G, 18G, 20G, 24G, 30G, 36G |
| Permissible Ambient Temperature                | Not more than 40°C           |
| Permissible Relative Humidity                  | Not more than 80%            |
| Size of the mixer (TXBXH)                      | 215X310X720mm                |
| Weight   | 8.7kg                        |

## Dispersing and emulsifying working head parameters:

| Stirring head specifications            | 12G    | 18G     | 24G     | 30G      | 36G       |
|---|--------|---------|---------|----------|-----------|
| Mixing capacity (H <sub>2</sub> O) ml   | 30-800 | 50-1500 | 80-5000 | 100-8000 | 150-13000 |
| Max. viscosity tolerated (mPa.S)        | 1000   | 2000    | 5000    | 6000     | 7000      |
| Max. Temperature tolerated (°C)         | 120    |         |         |          |           |
| Overall length (mm)                     | 215    | 222     | 120     |          |           |
| Stator diameter (mm)                    | 12     | 18      | 24      | 30       | 36        |
| Stirring head material                  | SS316  |         |         |          |           |
| Bearing material                        | PTFE   |         |         |          |           |
| Peak linear speed of rotor (m/s)        | 12     | 15      | 18      | 22       | 26        |
| Min. Height of the liquid immersed (mm) | 35     | 45      | 50      | 60       | 65        |
| Max. Height of the liquid immersed (mm) | 150    | 160     | 165     | 170      | 175       |

# Micro-plate Reader/Elisa Reader

## Characteristics

1. Advanced optical system, ensure accurate result and good repeatability.
2. 8 channel optical fiber system enables 5 secs' reading for 96 well plate.
3. Bichromatic measurement, multi-calculation methods include ABS, Cut-off, Linearity and Log.
4. Easily programmable and operate through PC software or keyboard
5. Ability to communicate with PC , free PC operating software
6. Plate shaking feature
7. 405nm, 450nm, 492nm, 630nm, 4 free positions

**To carry out ideal operation and data management for Elisa test, we provide an intelligent PC software for SPR-960**

8. Working base on Windows system.
9. Control machine, test programming, calculating results and indicating reagent recession curve.
10. Multi-calculation methods on board: linearity, LogX, logY, logXY, Parabola regression, Polynomial regression, 4PL Regression.
11. A complete data administration system for: micro-plate, reagent, patient, laboratory and results

## Technical Specification:

Model: SPR-960

Reading Speed: 5 seconds for 96 well plate

Light source: Halogen lamp 8V/50W

Filters: 405nm, 450nm, 492nm, 630nm, 4 open positions

Photometric Range: 0.000-4.000Abs

Photometric Accuracy:  $\pm 1\%$ (0.000-2.000Abs)

Wavelength Range: 340~750nm

Applicable programs: 28 except of PC

Measure Mode: Monochromatic , Bichromatic

Calculation Mode: ABS; Cut-off; Linearity; LogX; LogY

Display: 240\*128LCD

Interface: RS232, parallel interface for external printer

Output: External printer (optional)

Power supply: AC220V/110V $\pm 10\%$ ,50/60Hz

Dimension: 440(L)mmX305(W)mmX154(H)mm

Net weight: 7kg



# Micro-plate Washer/ Elisa Washer

## Characteristics:

1. Large LCD display, intelligent software, easy to operate.
2. Strong washing function, bottom washing and two positions aspiration make completed washing effect .
3. 8-channel or 12 channel optional.
4. Needle positions adjustable and up to 10 different needle positions pre-settable Pressure, volume & time adjustable, washing times, soap time pre-settable Pressure, volume & time adjustable, washing times, soap time pre-settable, whole plate or single strip reading.
5. Needle positions adjustable and up to 10 different needle positions pre-settable 5 position of needles are adjustable, fit for multi-kind of plates.
6. Self calibration and trouble alarm function.
7. Large memory to store up to 100 program



## Technical Specification

Model: SAR-520B

Plate: 48/96 well and trips (U,V, Flat bottom)

Residual Volume:  $\leq 2\mu\text{l}$

Dispensing volume: Adjustable from 50 to 900  $\mu\text{l}$

Wash cycles: 1-16 optional

Mode of wash: From 1 to 12, row and rank, selectable

Soak time: Up to 990 seconds adjustable

Shake time: Up to 990 seconds adjustable.

Display: Large LCD

Channel: 3 channels for washing liquid, 1 channel for waste liquid

Memory: up to 100 programs can be stored

Interface: RS232

Dimension: 450(L)mm×310(W)mm×170 (H)mm

Net Weight: 7.5kg

Power Supply: AC220V±10%, 50/60Hz; AC110V±10%, 50/60Hz

# Semi-auto Biochemistry Analyzer

## Characteristics:

1. Stream line design, nice appearance.
2. Self calibration and trouble alarm function.
3. Absolutely open system: both of programming and reagent.
4. Warning tone for finished sipping and any other ready function.
5. Function sketches on main menu, the software is simplicity, easy and fast operation.
6. Real time curve monitoring enhances the reliability of result.
7. Memory for 100 programs and 20000 test results, results tracking by date.
8. On-broad Quality control, control results available either memory or display.



## Technical Specificaitons:

Model: SBA-733PLUS

Measuring Mode: Kinetics, End point, Fixed time, Differential, Absorbance, Multi-standard

Light source: 6v/10w Halogen Lamp, life Span>3000 hours

Standard filter: 340nm, 405nm, 505nm, 546nm, 578nm,620nm, 670nm and one free position.

Band width:  $\leq 8\text{nm}$

Linearity range: 0.000-3.000Abs

Aspiration volume: 200-1400ul

Flow cell: 32ul, Optical diameter: 1cm

Cross contamination rate:  $\leq 1\%$

Temperature control:  $25^{\circ}\text{C}, 30^{\circ}\text{C}, 37^{\circ}\text{C}, \pm 0.1^{\circ}\text{C}$  and be controlled by peliter

Language: English or any language on request

Output: Built-in printer, RS232 for additional PC

Display: 240\*128LCD

Power supply: AC220V $\pm 10\%$ , 50/60Hz

Dimension: 430(L)mm $\times$ 320(W)mm $\times$ 220(H)mm

Net weight: 9.0kg



Cuvette (optional)



Full size qwerty keyboard



Reaction & control graph printable



In-built incubation plate

# Rotary Evaporator



AE-RE2



AE-RE2L



AE-RE5



AE-RE10



AE-RE20



AE-RE50



# AE-RE2 & AE-RE2L Specifications

| Model                    |                   | AE-RE2  | AE-RE2L        |
|--------------------------|-------------------|---|----------------|
| Electrical Requirements  |                   | 1~110V, 60Hz or 1~220V, 50/60Hz               |                |
| Motor Power              |                   | 25 W  |                |
| Working Environment      |                   | 5~35 °C                                       |                |
| Water Bath               | Temperature       | Room Tem~99 °C                                |                |
|                          | Temp Accuracy     | ±1 °C   |                |
|                          | Size (mm)         | φ254×130                                      |                |
|                          | Capacity          | 6.5 L   |                |
|                          | Heating Power     | 1.05 KW                                       |                |
|                          | Media             | Water   |                |
| Temperature Control      |                   | Keypad Setting, Digital Display               |                |
| Condenser                | Type              | Vertical                                      | Diagonal       |
|                          | Cooling Surface   | 1260 cm <sup>2</sup>                          |                |
| Rotating Flask           | Capacity          | 0.5~2L  |                |
|                          | Evaporating Speed | 20 ml/min                                     |                |
|                          | Rotating Speed    | 20~180 rpm                                    |                |
|                          | Speed Control     | Knob Setting, Digital Display                 |                |
| Receiving Flask Capacity |                   | 1 L   |                |
| Vacuum                   | Ultimate Vacuum   | ≤ 399.9 Pa                                    |                |
|                          | Vacuum Sealing    | PTFE+Viton Gaskets (double sealing)           |                |
| Lift                     | Lifting Function  | Sliding + Manual Lift                         |                |
|                          | Lifting Distance  | 100mm + 150mm                                 |                |
| Safety Protection        |                   | Dry-run, Over-temp shut-off, Fuse protections |                |
| Dimension (mm)           |                   | 560W×320D×660H                                | 750W×320D×540H |
| Net Weight               |                   | 9.5 KG  |                |
| Package                  |                   | Carton  |                |

# AE-RE5 Specifications

| Model                    |                   | AE-RE5  |
|--------------------------|-------------------|---|
| Electrical Requirement   |                   | 1~220V, 50/60Hz                               |
| Motor Power              |                   | 250 W   |
| Overall Power            |                   | 2.3 KW  |
| Working Environment      |                   | 5~35 °C                                       |
| Water Bath               | Temperature       | Room Tem~99 °C                                |
|                          | Temp Accuracy     | ±1 °C   |
|                          | Size              | Φ300×170mm                                    |
|                          | Material          | Stainless Steel                               |
|                          | Media             | Water   |
|                          | Capacity          | 12L   |
| Condenser                | Type              | Vertical double condensing coils              |
|                          | Cooling Surface   | 2780 cm <sup>2</sup>                          |
| Rotating Flask           | Capacity          | 5L  |
|                          | Opening Diameter  | Flange Φ50mm                                  |
|                          | Evaporating Speed | Water: 2 L/h; Alcohol: 5.4 L/h                |
|                          | Rotating Speed    | 20~140 rpm                                    |
|                          | Speed Control     | Digital Display and Stepless Control          |
| Receiving Flask Capacity |                   | 3L  |
| Vacuum                   | Ultimate Vacuum   | ≤ 399.9 (3mmHg)                               |
|                          | Vacuum Sealing    | PTFE + Viton Gaskets                          |
| Lift                     | Lifting           | Motorized Lift                                |
|                          | Lifting Distance  | 0~150mm                                       |
| Safety Protection        |                   | Dry-run, Over-temp shut-off, Fuse protections |
| Dimension (mm)           |                   | 835W×400D×1090H                               |
| Net Weight               |                   | 35 KG   |
| Package                  |                   | Wooden Case                                   |

# AE-RE10 Specifications

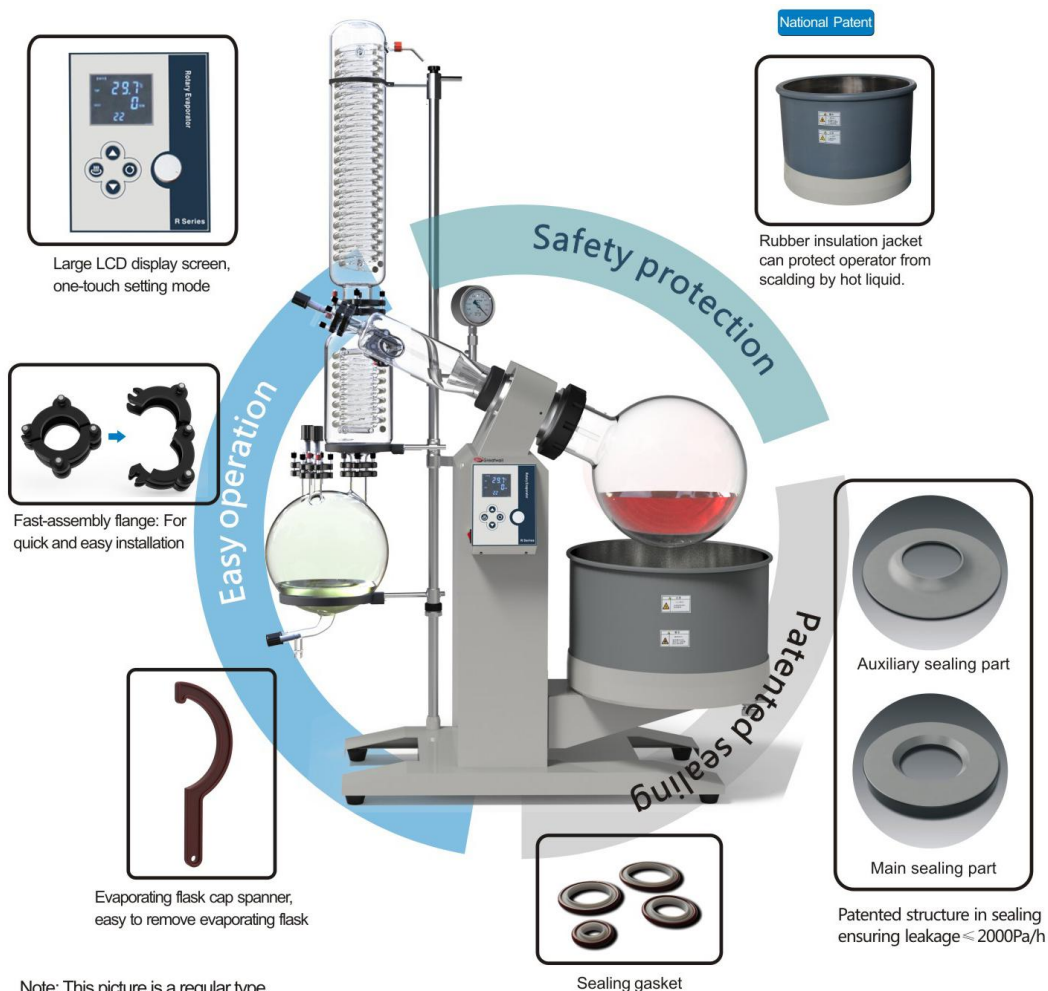
| Model                    |                   | AE-RE10   |
|--------------------------|-------------------|---|
| Electrical Requirement   |                   | 1~220V, 50/60Hz   |
| Overall Power            |                   | 3.8 KW  |
| Motor Power              |                   | 250 W   |
| Working Environment      |                   | 5~35°C  |
| Water Bath               | Temperature       | Room Tem~99°C   |
|                          | Temp Accuracy     | ±1°C  |
|                          | Size (mm)         | Φ350×220mm  |
|                          | Material          | Stainless Steel   |
|                          | Capacity          | 21L   |
|                          | Media             | Water   |
| Condenser                | Type: Vertical    | Main Condenser + Auxiliary Condenser  |
|                          | Cooling Surface   | Main Condenser: 3900cm <sup>2</sup><br>Auxiliary Condenser: 2530cm <sup>2</sup> |
| Rotating Flask           | Capacity          | 10L   |
|                          | Opening Diameter  | Flange Φ125mm   |
|                          | Evaporating Speed | Water: 3.2L/h; Alcohol: 8.6L/h  |
|                          | Rotating Speed    | 20~130 rpm  |
|                          | Speed Control     | Digital Display and Stepless Control  |
| Receiving Flask Capacity |                   | 5L  |
| Vacuum                   | Ultimate Vacuum   | ≤ 399.9 Pa (3mmHg)  |
|                          | Vacuum Sealing    | PTFE + Viton Gaskets  |
| Lift                     | Lifting           | Motorized Lift  |
|                          | Lifting Distance  | 0~160mm   |
| Safety Protection        |                   | Dry-run, Over-temp shut-off, Fuse protections                                   |
| Dimension (mm)           |                   | 990W×550D×1655H   |
| Net Weight               |                   | 61 KG   |
| Package                  |                   | Wooden Case   |

# AE-RE20 Specifications

| Model                    |                   | AE-RE20   |
|--------------------------|-------------------|---|
| Electrical Requirement   |                   | 3~, 380V,50/60Hz  |
| Motor Power              |                   | 250W  |
| Overall Power            |                   | 6.3KW   |
| Working Environment      |                   | 5~35°C  |
| Water Bath               | Temperature       | Room Tem~99°C   |
|                          | Temp Accuracy     | ±1°C  |
|                          | Size (mm)         | Φ450×260  |
|                          | Material          | Stainless Steel   |
|                          | Capacity          | 41L   |
|                          | Media             | Water   |
| Condenser                | Type: Vertical    | Main Condenser + Auxiliary Condenser  |
|                          | Cooling surface   | Main Condenser: 9480cm <sup>2</sup><br>Auxiliary Condenser: 3580cm <sup>2</sup> |
| Rotating Flask           | Capacity          | 20L   |
|                          | Opening Diameter  | Flange Φ125mm   |
|                          | Evaporating Speed | Water: 5 L/h; Alcohol: 14.3 L/h   |
|                          | Rotating Speed    | 20~130 rpm  |
|                          | Speed Control     | Digital Display and Stepless Control  |
| Receiving Flask Capacity |                   | 10L   |
| Vacuum                   | Ultimate Vacuum   | ≤ 399.9 Pa (3mmHg)  |
|                          | Vacuum Sealing    | PTFE + Viton Gaskets  |
| Lift                     | Lifting           | Motorized Lift  |
|                          | Lifting Distance  | 0~190mm   |
| Safety Protection        |                   | Dry-run, Over-temp shut-off, Fuse protections                                   |
| Dimension (mm)           |                   | 1195W×635D×2070H  |
| Net Weight               |                   | 90 KG   |
| Package                  |                   | Wooden Case   |

# AE-RE50 Specifications

| Model                    |                   | AE-RE50  |
|--------------------------|-------------------|--|
| Electrical Requirement   |                   | 3~, 380V, 50/60Hz  |
| Motor Power              |                   | 250 W  |
| Overall Power            |                   | 6.3 KW   |
| Working Environment      |                   | 5~35°C   |
| Water Bath               | Temperature       | Room Tem~99°C  |
|                          | Temp Accuracy     | ±1°C   |
|                          | Size              | Φ550×320mm   |
|                          | Material          | Stainless Steel  |
|                          | Capacity          | 77L  |
| Media                    |                   | Water  |
| Condenser                | Type: Vertical    | Main Condenser + Auxiliary Condenser   |
|                          | Cooling Surface   | Main Condenser: 11500cm <sup>2</sup><br>Auxiliary Condenser: 4000cm <sup>2</sup> |
| Rotating Flask           | Capacity          | 50L  |
|                          | Opening Diameter  | Flange Φ125mm  |
|                          | Evaporating Speed | Water: 9 L/h; Alcohol: 24.5 L/h  |
|                          | Rotating Speed    | 20~110 rpm   |
|                          | Speed Control     | Digital Display and Stepless Control   |
| Receiving Flask Capacity |                   | 20L  |
| Vacuum                   | Ultimate Vacuum   | ≤ 399.9 Pa (3mmHg)   |
|                          | Vacuum Sealing    | PTFE + Viton Gaskets   |
| Lift                     | Lifting           | Motorized Lift + Manual Lift   |
|                          | Lifting Distance  | 0~180mm  |
| Safety Protection        |                   | Dry-run, Over-temp shut-off, Fuse protections                                    |
| Dimension (mm)           |                   | 1345W×770D×2140H   |
| Net Weight               |                   | 140 KG   |
| Package                  |                   | Wooden Case  |



Note: This picture is a regular type

# High Frequency Desk-top Ultrasonic Cleaner

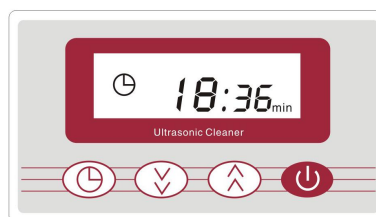
## Introduction:

53 kHz Ultrasonic Cleaner which applies the latest overseas design technology, covers the features of Ultrasonic Cleaners with various frequencies. It is very effective on cleaning as well as mixing (dissolving, emulsification, adulteration), degassing, de-foaming, extraction and chemistry stimulation.



## Major Specifications:

|                     |                        |
|---------------------|------------------------|
| Display             | Backlight LCD          |
| Operating Frequency | 53kHz                  |
| Power Supply        | 220V/50Hz or 110V/60Hz |
| Digital Timer       | (1-99)min              |
| Material of tank    | 304 Stainless Steel    |



## Technical Specifications:

| Model    | Ultrasonic (W) | Capacity (L) | Tank Size (LxWxH)(mm) | External Size (LxWxH)(mm) | Carton Size (LxWxH)(mm) | Weight(kg) Net | Accessories                 |
|----------|----------------|--------------|-----------------------|---------------------------|-------------------------|----------------|-----------------------------|
| AE-HF50  | 50             | 2            | 150x140x100           | 180x160x220               | 250x228x301             | 2.5            | Support Rack                |
| AE-HF100 | 100            | 3            | 240x140x100           | 270x160x240               | 367x267x334             | 4.5            | Support Rack                |
| AE-HF150 | 150            | 4.5          | 300x150x100           | 330x180x240               | 405x260x335             | 5.2            | Support Rack                |
| AE-HF180 | 180            | 6            | 300x150x150           | 330x180x290               | 427x279x394             | 6              | Support Rack                |
| AE-HF200 | 200            | 10           | 300x240x150           | 360x270x310               | 432x367x397             | 8.3            | Support Rack Soft Drainpipe |
| AE-HF250 | 250            | 10           | 300x240x150           | 360x270x310               | 432x367x397             | 8.7            | Support Rack Soft Drainpipe |
| AE-HF350 | 350            | 15           | 330x300x150           | 390x330x310               | 457x459x412             | 10.3           | Support Rack Soft Drainpipe |
| AE-HF500 | 500            | 22.5         | 500x300x150           | 570x330x330               | 662x431x428             | 13.8           | Support Rack Soft Drainpipe |

# Low Frequency Desk-top Ultrasonic Cleaner

(with Heater/ Degas/Heater & Degas)

## Major Specifications:

|                                    |                        |
|------------------------------------|------------------------|
| Operating Frequency                | 35kHz                  |
| Power Supply                       | 220V/50Hz or 110V/60Hz |
| Digital Timer                      | (1-99)min              |
| Temperature Set Range (for Heater) | 20°C-69°C              |
| Material of tank                   | 304 Stainless Steel    |
| Function                           | Degas                  |



## Technical Specification:

| Model      | Ultrasonic (W) | Heater (W) | Capacity (L) | Tank Size (LxWxH)(mm) | External Size (LxWxH)(mm) | Carton Size (LxWxH)(mm) | Weight(kg) Net | Accessories                       |
|------------|----------------|------------|--------------|-----------------------|---------------------------|-------------------------|----------------|-----------------------------------|
| AE-LF50    | 50             | -          | 2            | 150x140x100           | 180x160x220               | 250x228x301             | 2.9            | Support Rack                      |
| AE-LF100   | 100            | -          | 3            | 240x140x100           | 270x160x240               | 367x267x334             | 4.6            | Support Rack                      |
| AE-LF180   | 180            | -          | 5            | 300x150x100           | 330x180x290               | 427x279x394             | 6.3            | Support Rack                      |
| AE-LF200   | 200            | -          | 6            | 300x240x150           | 360x270x310               | 432x367x397             | 8.2            | Support Rack Soft Drainpipe       |
| AE-LF350   | 350            | -          | 15           | 330x300x150           | 390x330x310               | 457x459x412             | 10.6           | Support Rack Soft Drainpipe       |
| AE-LF500   | 500            | -          | 22.5         | 500x300x150           | 570x330x330               | 662x431x428             | 14.1           | Support Rack Soft Drainpipe       |
| AE-LF600   | 600            | -          | 30           | 500x300x200           | 570x330x380               | 662x431x478             | 21.2           | Support Rack Soft Drainpipe       |
| AE-LF50H   | 50             | 48         | 2            | 150x140x100           | 180x160x220               | 250x228x301             | 3              | Support Rack Cover                |
| AE-LF100H  | 100            | 88         | 3            | 240x140x100           | 270x160x240               | 367x267x334             | 4.8            | Support Rack Cover                |
| AE-LF180H  | 180            | 170        | 6            | 300x150x150           | 330x180x290               | 427x279x394             | 6.6            | Support Rack Cover                |
| AE-LF200H  | 200            | 270        | 10           | 300x240x150           | 360x270x310               | 432x367x397             | 8.6            | Support Rack Cover                |
| AE-LF350H  | 350            | 370        | 15           | 330x300x150           | 390x330x310               | 457x459x412             | 11             | Support Rack Soft Drainpipe Cover |
| AE-LF500H  | 500            | 550        | 22.5         | 500x300x150           | 570x330x330               | 662x431x428             | 14.6           | Support Rack Soft Drainpipe Cover |
| AE-LF600H  | 600            | 750        | 30           | 500x300x200           | 570x330x380               | 662x431x478             | 22             | Support Rack Soft Drainpipe Cover |
| AE-LF50D   | 50             | -          | 2            | 150x140x100           | 180x160x220               | 250x228x301             | 2.9            | Support Rack                      |
| AE-LF100D  | 100            | -          | 3            | 240x140x100           | 270x160x240               | 367x267x334             | 4.6            | Support Rack                      |
| AE-LF180D  | 180            | -          | 6            | 300x150x150           | 330x180x290               | 427x279x394             | 6.3            | Support Rack                      |
| AE-LF200D  | 200            | -          | 10           | 300x240x150           | 360x270x310               | 432x367x397             | 8.2            | Support Rack Soft Drainpipe       |
| AE-LF350D  | 350            | -          | 15           | 330x300x150           | 390x330x310               | 457x459x412             | 10.6           | Support Rack Soft Drainpipe       |
| AE-LF500D  | 500            | -          | 22.5         | 500x300x150           | 570x330x330               | 662x431x428             | 14.1           | Support Rack Soft Drainpipe       |
| AE-LF600D  | 600            | -          | 30           | 500x300x200           | 570x330x380               | 662x431x478             | 21.2           | Support Rack Soft Drainpipe       |
| AE-LF50DH  | 50             | 48         | 2            | 150x140x100           | 180x160x220               | 250x228x301             | 3              | Support Rack Cover                |
| AE-LF100DH | 100            | 88         | 3            | 240x140x100           | 270x160x240               | 367x267x334             | 4.8            | Support Rack Cover                |
| AE-LF180DH | 180            | 170        | 6            | 300x150x150           | 330x180x290               | 427x279x394             | 6.6            | Support Rack Cover                |
| AE-LF200DH | 200            | 270        | 10           | 300x240x150           | 360x270x310               | 432x367x397             | 8.6            | Support Rack Soft Drainpipe Cover |
| AE-LF350DH | 350            | 370        | 15           | 330x300x150           | 390x330x310               | 457x459x412             | 11             | Support Rack Soft Drainpipe Cover |
| AE-LF500DH | 500            | 550        | 22.5         | 500x300x150           | 570x330x330               | 662x431x428             | 14.6           | Support Rack Soft Drainpipe Cover |
| AE-LF600DH | 600            | 750        | 30           | 500x300x200           | 570x330x380               | 662x431x478             | 22             | Support Rack Soft Drainpipe Cover |



# Pocket pH/ORP/Conductivity/TDS/Salinity Tester

## Feature:

- ※ Extensive applications: Ideal for check on water quality, plating operations, field applications and other redox measurements.
- ※ Display: Large LCD screen with backlit for easy reading, provides comprehensive meter information.
- ※ Easy Maintenance, no tools needed to change batteries and electrode.
- ※ Auto-off function, data-hold function and low-batteries indicator.
- ※ Waterproof housing (IP-67).
- ※ Multi-purpose carrying case.
- ※ Auto-lock function.
- ※ Electrode slope indicator display.
- ※ User-replaceable electrode.
- ※ 500+ battery life with 1x1.5V AAA (2x1.5V AAA for AE-CON10).



## Technical Specifications:

| Model                    | AE-PH10                          | AE-ORP10                         | AE-CON10  |
|--------------------------|----------------------------------|----------------------------------|---|
| Measurement Range        | -2.00~16.00pH                    | -900~+900mV                      | 0~200.0uS/cm(ppm), 0~2000uS/cm (ppm)<br>0~20.00mS/cm(ppt), 0~50.0mS/cm(ppt) |
| Temperature Range        | 0~60°C/32~140°F                  | 0~60°C/32~140°F                  | 0~60°C/32~140°F   |
| Resolution               | 0.01pH,0.1°C/°F                  | 1mV,0.1°C/1°F                    | 0.1, 1uS/cm(ppm), 0.01, 0.1mS/cm(ppt)                                       |
| Accuracy                 | ±0.01pH                          | ±1mV                             | ±1%F.S  |
| Temperature Compensation | ATC Auto                         | —                                | 0.0°C~60°C Auto   |
| Temperature Coefficient  | —                                | —                                | 0.00~10.00% adjustable (default 2.00%)                                      |
| Temperature Reference    | —                                | —                                | 15~30°C adjustable (default 25°C)   |
| TDS Coefficient          | —                                | —                                | 0.40~1.00 adjustable (default 0.50)   |
| Salinity Range           | —                                | —                                | 0-30ppt   |
| Salinity Coefficient     | —                                | —                                | 0.65  |
| Ingress Protection       | IP67                             | IP67                             | IP67  |
| Calibration              | Auto, up to 5 points             | —                                | 1 point   |
| Electrode                | AE-PH10-1                        | AE-ORP10-1                       | AE-CON10-1  |
| Power Supply             | 1x1.5V AAA                       | 1x1.5V AAA                       | 2x1.5V AAA  |
| Memory                   | 10sets                           | 10sets                           | 10sets  |
| Display                  | 22x32mm<br>Photo-Luminescent LCD | 22x32mm<br>Photo-Luminescent LCD | 22x32mm<br>Photo-Luminescent LCD  |
| Dimensions/Weight        | 164x37x40mm/90g                  | 164x37x40mm/90g                  | 164x37x40mm/90g   |

## TESTER ACCESSORIES

### AE-PH10-1

pH Electrode  
Type: Glass  
Test Range: 0~14pH  
Temperature Range:  
0~60° C  
Electrolyte: 3 mol KCL



### AE-ORP10-1

ORP Electrode  
Type: Platinum  
Temperature Range:  
0~60° C  
Reference System:  
Ag/AgCl  
Electrolyte: 3 mol KCL



### AE-CON10-1

Conductivity Electrode  
Type: PPS/Graphite  
Temperature Range:  
0~60° C  
Cell Constant: K=1.0



## Pocket Dissolved Oxygen/Free Chlorine Tester

### Feature:

- ※ Extensive application : Aquacultural: Use to monitor oxygen levels in ornamental fish tanks and ponds; fish and shells farming.
- ※ Display: Large LCD screen with backlit for easy reading, provides comprehensive meter information.
- ※ Easy Maintenance, no tools needed to change batteries and electrode.
- ※ Auto-off function, data-hold function and low-batteries indicator.
- ※ High quality multi-function carrying case.
- ※ Stability Auto-Hold function.
- ※ Electrode slope indicator display.



### Technical Specifications:

| Model                             | AE-DO10                          | AE-FCL20  |
|-----------------------------------|----------------------------------|---|
| Measurement Range                 | 0.00~20.00mg/L, 0.0~200.0%       | 0.05~2.00ppm  |
| Temperature Range                 | 0~60°C/32~140°F                  | 0~60°C/32~140°F                                     |
| Resolution                        | 0.01mg/L / 0.1% / 0.1°C/0.1°F    | 0.01ppm/0.1°C/1°F                                   |
| Accuracy                          | ±1.5%F.S. ±0.3°C/0.5°F           | ±2%F.S.   |
| Temperature Compensation          | 0.0~60°C/32~140°F                | —   |
| Atmospheric Pressure Compensation | 600~1100mbar                     | —   |
| Salinity Compensation             | 0.0~40.0ppt                      | —   |
| Ingress Protection                | IP67                             | IP67  |
| Calibration                       | 1 or 2 points                    | 2 points  |
| Electrode                         | AE-DO10-1                        | AE-FCL20-1  |
| Power Supply                      | 1x1.5V AAA                       | 2x1.5V AAA  |
| Memory                            | 10sets                           | 10sets  |
| Display                           | 22x32mm<br>Photo-Luminescent LCD | 22x32mm<br>Photo-Luminescent LCD                    |
| Dimensions/Weight                 | 164x37x40mm/90g                  | 164x37x40mm/90g                                     |
| Remark                            | —                                | AE-FCL10-1 Miniature Stirrer with a constant speed. |

### TESTER ACCESSORIES

#### AE-DO10-1

Galvanic DO Electrode  
 Type: Platinum Cathode/Alloy  
 Anode  
 Temperature System: NTC22K  
 Test Range: 0~20mg/L  
 Temperature Range: 0~60°C



#### AE-FCL20-1

AE-FCL20 Electrode  
 Type: Three-electrode sensor  
 Temperature Range: 0~60°C  
 Reference System: Ag/AgCl  
 Electrolyte: 3 mol Colloid KCL



# Portable Tester (pH/ORP/Conductivity/TDS/Salinity/DO Tester)

## Feature:

- ※ Applications: Schools and Education institutes, Chemical laboratories, Quality assurance testing, food science.
- ※ Large LCD display, great 120 degree angle view.
- ※ Data Hold function.
- ※ Temperature offset adjusting function.
- ※ 100 sets of data storage function.
- ※ Built-in rechargeable Li-battery (Bench-top Meter).
- ※ Offset value function.



## Technical Specifications:

| Type                     | PH/ORP Tester   |          | Conductivity/TDS Meter   | DO Meter  |
|--------------------------|---|----------|--|---|
| Model                    | AE-PH701  | AE-PH801 | AE-CON401  | AE-DO301  |
| Measurement Range        | PH: -2.00~16.00pH<br>ORP: -2000~2000mV<br>Temp: -5.0~120.0°C/23.0~248.0°F |          | 0~5.000uS/cm(ppm),0~50.00uS/cm(ppm)<br>0~500.0uS/cm(ppm),0~5000uS/cm(ppm)<br>0~50.00mS/cm(ppt),0~500.0mS/cm(ppt) | 0.00~40.00 mg/L,0.0~400.0%<br>-5.0~120.0°C, /23.0~248.0°F |
| Resolution               | 0.01pH, 0.1mV<br>(-600.0~600.0).0.1/0.1°F                                 |          | 0.001uS/cm(ppm),0.01uS/cm(ppm)<br>0.1uS/cm(ppm),1uS/cm(ppm)<br>0.01mS/cm(ppt),0.1mS/cm(ppt)                      | 0.01mg/L,<br>0.1%, 0.1°C/0.1°F                            |
| Accuracy                 | ±0.01pH,±0.2mV/1mV,±0.3°C/±0.5°F  |          | ±1% F.S, ±0.3°C/±0.5°F   |   |
| Temperature Compensation | -5.0~120.0°C Auto<br>AE-PH701/801 Auto/Manual                             |          | Auto   | 0-60.0°C<br>Auto/Manual                                   |
| Resistivity Range        | ---   |          | 0-18.30MΩ*cm   | ---   |
| Resistivity Resolution   | ---   |          | 0.01MΩ*cm  | ---   |
| Resistivity Accuracy     | ---   |          | ±1% F.S.   | ---   |
| TDS Coefficient          | ---   |          | 0.40~1.00(default 0.50)  | ---   |
| Salinity Range           | ---   |          | 0-300ppt   | ---   |
| Salinity Coefficient     | ---   |          | 0.65   | ---   |
| Memory                   | 100sets   |          |  |   |
| Interface                | USB   |          |  |   |
| Auto Power Off           | 10 minutes no key is pressed  |          | ---  | 10 minutes no key is pressed                              |
| Calibration              | auto, up to 5 points  |          | Auto, up to 1 points   | AUTO/MANUAL   |
| Cell Constant            | ---   |          | 0.01/0.1/1/10<br>with specified electrode  | ---   |
| Power Supply             | 2x1.5V AA   |          |  |   |
| Ingress Protection       | IP65  |          | IP67   |   |
| Size/Weight              | 73x152x42mm/250g  |          |  |   |

# Bench-top Tester (pH/ORP/Conductivity/TDS/Salinity/DO Tester)

## Feature:

- ※ Applications: Schools and Education institutes, Chemical laboratories, Quality assurance testing, food science.
- ※ Large LCD display, great 120 degree angle view.
- ※ Data Hold function.
- ※ Temperature offset adjusting function.
- ※ 100 sets of data storage function.
- ※ Built-in rechargeable Li-battery (Bench-top Meter).
- ※ Offset value function.

## Technical Specifications:



| Type                     | PH/ORP Tester   |          | Conductivity/TDS Meter   | DO Meter  |
|--------------------------|---|----------|--|---|
| Model                    | AE-PH711  | AE-PH811 | AE-CON411  | AE-DO311  |
| Measurement Range        | PH: -2.00~16.00pH<br>ORP: -2000~2000mV<br>Temp: -5.0~120.0°C/23.0~248.0°F |          | 0~5.000uS/cm(ppm),0~50.00uS/cm(ppm)<br>0~500.0uS/cm(ppm),0~5000uS/cm(ppm)<br>0~50.00mS/cm(ppt),0~500.0mS/cm(ppt) | 0.00~40.00 mg/L,0.0~400.0%<br>-5.0~120.0°C, /23.0~248.0°F |
| Resolution               | 0.01pH, 0.1mV<br>(-600.0~600.0).0.1/0.1°F                                 |          | 0.001uS/cm(ppm),0.01uS/cm(ppm)<br>0.1uS/cm(ppm),1uS/cm(ppm)<br>0.01mS/cm(ppt),0.1mS/cm(ppt)                      | 0.01mg/L,<br>0.1%, 0.1°C/0.1°F                            |
| Accuracy                 | ±0.01pH,±0.2mV/1mV,±0.3°C/±0.5°F  |          | ±1% F.S, ±0.3°C/±0.5°F   |   |
| Temperature Compensation | -5.0~120.0°C Auto<br>AE-PH701/801 Auto/Manual                             |          | Auto   | 0-60.0°C<br>Auto/Manual                                   |
| Resistivity Range        | ---   |          | 0-18.30MΩ*cm   | ---   |
| Resistivity Resolution   | ---   |          | 0.01MΩ*cm  | ---   |
| Resistivity Accuracy     | ---   |          | ±1% F.S.   | ---   |
| TDS Coefficient          | ---   |          | 0.40~1.00(default 0.50)  | ---   |
| Salinity Range           | ---   |          | 0-300ppt   | ---   |
| Salinity Coefficient     | ---   |          | 0.65   | ---   |
| Memory                   | 100sets   |          |  |   |
| Interface                | USB   |          |  |   |
| Auto Power Off           | 10 minutes no key is pressed  |          | ---  | 10 minutes no key is pressed                              |
| Calibration              | auto, up to 5 points  |          | Auto, up to 1 points   | AUTO/MANUAL   |
| Cell Constant            | ---   |          | 0.01/0.1/1/10 with specified electrode   | ---   |
| Power Supply             | 100-240V AC   |          |  |   |
| Ingress Protection       | IP64  |          |  |   |
| Size/Weight              | 150x194x56mm/1kg  |          |  |   |

# pH / ORP Controller

## Feature:

- ※ Application : For monitoring of Industrial Process, Waste water measurements, Pharmaceutical, Chemical and Food & Beverage industries.
- ※ Panel or Wall mounts Enclosures, NEMA4X, IP65 waterproof, dust proof.
- ※ Provide precise measurement at industrial site or water treatment process.
- ※ Symmetric signal output interface, preventing electromagnetic interference.
- ※ Scalable isolated output: 0/4~20 mA.
- ※ Two level password protections prevent unauthorized tampering of setting.
- ※ Large LCD, with orange backlit.
- ※ Two separate mechanical relays for high and low (HH/HL/LL) set points or delay time.
- ※ Separately adjustable high and low set-point hysteresis (dead bands) prevent chattering of relays around the set point.
- ※ The third mechanical relays for electrode self-cleaning or alarm.



## Technical Specifications:

| Model                      | AE-PH8000                         | AE-PH8300                         | AE-PH8500                         |
|----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| pH Range                   | -2.00~16.00pH                     | -2.00~16.00pH                     | -2.00~16.00pH                     |
| Resolution / Accuracy      | 0.01pH / ±0.01pH                  | 0.01pH / ±0.01pH                  | 0.01pH / ±0.01pH                  |
| pH Standard Buffer         | USA / NIST                        | USA / NIST                        | USA / NIST                        |
| pH Calibration             | 1 or 2 point                      | 1 or 2 point                      | 1 or 2 point                      |
| ORP Range                  | -2000~2000mV                      | -2000~2000mV                      | -2000~2000mV                      |
| Resolution                 | 1mV                               | 1mV                               | 1mV                               |
| Accuracy                   | ±1mV                              | ±1mV                              | ±1mV                              |
| Temperature Range          | -9.9~130.0°C                      | -9.9~130.0°C                      | -9.9~130.0°C                      |
| Resolution / Accuracy      | 0.1°C / ±0.5°C                    | 0.1°C / ±0.5°C                    | 0.1°C / ±0.5°C                    |
| Temperature Sensor         | PT1000                            | PT1000                            | PT1000                            |
| Temperature Compensation   | ATC Automatic / MTC Manual        | ATC Automatic / MTC Manual        | ATC Automatic / MTC Manual        |
| pH Electrode               | Standard pH or Antimony electrode | Standard pH or Antimony electrode | Standard pH or Antimony electrode |
| Signal Input               | Symmetrical / Asymmetrical        | Symmetrical / Asymmetrical        | Symmetrical / Asymmetrical        |
| Signal Output / Load       | 0 / 4~20mA / 600Ω                 | 0 / 4~20mA / 600Ω                 | 0 / 4~20mA / 600Ω                 |
| Output Interface           | —                                 | RS-485                            | RS-485                            |
| Relay Specification        | 2 SPST / 250V 1A                  | 3 SPST / 250V 1A                  | 3 SPST / 250V 1A                  |
| Frequency of Cleaning Time | —                                 | 1~999hours / 1~999sec             | 1~999hours / 1~999sec             |
| Control hysteresis band    | 0.01~2.00pH / 1~200mV             | 0.01~2.00pH / 1~200mV             | 0.01~2.00pH / 1~200mV             |
| EMC Standard               | EN 50081-1 / EN50082-1            | EN 50081-1 / EN50082-1            | EN 50081-1 / EN50082-1            |
| Operation Temperature      | -10~50°C (14~122°F)               | -10~50°C (14~122°F)               | -10~50°C (14~122°F)               |
| Operation Humidity         | 10~95%                            | 10~95%                            | 10~95%                            |
| Power Supply               | 220/110VAC                        | 220/110VAC                        | 220/110VAC                        |
| Size / Weight              | 100x108x150mm/900g                | 100x108x150mm/900g                | 190x160x133mm/1.5Kg               |

| Model                | AE-PH8000        | AE-PH8100        | AE-PH8200        | AE-PH8300             | AE-PH8500             |
|----------------------|------------------|------------------|------------------|-----------------------|-----------------------|
| Type                 | Embedded PH      | Embedded PH      | Wall-Mounts PH   | Embedded PH           | Wall-Mounts PH        |
| relay specifications | 2 relays/250V,1A | 3 relays/250V,1A | 3 relays/250V,1A | 3 relays/250V,1A      | 3 relays/250V,1A      |
| Output interface     | 0/4-20mA Output  | 0/4-20mA Output  | 0/4-20mA Output  | 0/4-20mA/RS485 Output | 0/4-20mA/RS485 Output |



## 3 in 1 Portable Colorimeter (for Free Chlorine, Total Chlorine, Combined Chlorine)

### Applications:

AE-C301 is designed for the testing of Free chlorine, total chlorine, combined chlorine. It can be widely used in the field of urban water supply, food and beverage, environmental, medical, chemical, pharmaceutical, thermal power, paper making, farming, bio-engineering, fermentation technology, textile printing and dyeing, petrochemical, water treatment and other water quality site rapid testing or laboratory standards detection.

### Features:

#### ※ Time saving and convenient testing.

Three steps operation and with sample zeroing, detected within 1min, adding proper reagent and testing make the water analysis become technology intensive.

#### ※ Easy and fast configuration.

Pre-measured package and optimized configuration relieve your burden effectively. Thus the field work is no longer a fussy task.

#### ※ Simple and light design.

0.15kg net weight and simple keypad with five buttons help relieve your work burden in testing.

#### ※ Efficient and automatic calculation.

With the help of default programme module and rigorous standard formula, the time needed for data transformation reduces to 1-2s.

#### ※ Stable and accurate testing result.

EPA based automation technique and calibrated standard curve improve the stability and repeatability.

### Technical Specifications:

| Model                | AE-C301   |
|----------------------|---|
| Testing range        | Free Chlorine: 0.01-5.00mg/L; Total Chlorine: 0.01-5.00mg/L;<br>Combined Chlorine: 0.01-5.00mg/L; |
| Precision            | 3%±0.01   |
| Testing Method       | DPD spectrophotometry   |
| Waterproof level     | IP54  |
| Weight               | 0.15kg  |
| Standard             | USEPA (20th edition)  |
| Power supply         | Two AA batteries  |
| Dimension (L×W×H)    | 16.0×6.2×3.0cm  |
| Standard Accessories | With No.2/3 reagent kit, sample cell, user manual, shielded cap, carrying case.                   |



## Portable Turbidity Meter

### Characteristics:

- ✧ Compact in size, novel in design & LCD display with suitcase package.
- ✧ Succinct operation, suitable measurement range & higher performance.
- ✧ Low draft, High Accuracy, Nice Stability ensure long-time & stable running.
- ✧ Unique positioning structure & high precision optical system effectively guarantee measuring values accuracy and repeatability.
- ✧ Lower consumption and AC & DC power supply convenience for operating outside or laboratory.
- ✧ With low voltage indication function remand of users replace battery timely. With data output interface.



AE-TB001/002/003/004

### Technical Specifications:

| Model             | AE-TB001                | AE-TB002 | AE-TB003 | AE-TB004 | AE-TU100  |
|-------------------|-------------------------|----------|----------|----------|-----------|
| Principle         | 90°Scattered light      |          |          |          |           |
| Minimum Readout   | 0.01                    | 0.1      | 0.1      | 0.1      | 0.01      |
| Measurement Range | 0-20NTU                 | 0-50NTU  | 0-200NTU | 0-400NTU | 0-1000NTU |
| Basic Error       | ±1.5%F.S                |          |          |          |           |
| Repeatability     | ≤2%                     |          |          |          | ≤1%       |
| Zero Draft        | ±1.5%F.S                |          |          |          |           |
| Power Supply      | Power adapter & battery |          |          |          |           |
| Dimension         | 345X285X295mm & 3kg     |          |          |          |           |

# Digital/Portable Fluorescence Whiteness Meter

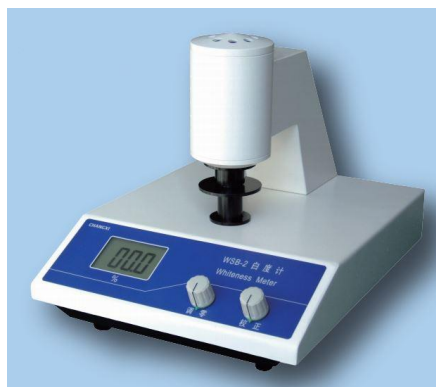
## Application:

This instrument based on the principle of photoelectric effect & D65 light source (R457) and with 45/0 as a illumination condition. Meanwhile, except solution or liquid samples, this instrument can be widely measured the whiteness value of any substances. Such as: powder, board, paper, paste, sheet, clay, etc.

- ❖ **Chemical & Building materials industry:** White Cement (powder), Paint (pasty), Coating (pasty), Plastic (boards), Steel Plate (boards), Ceramics (powder), Gypsum (powder), Wallpaper (paper/sheet), Porcelain Enamel (powder), Calcium Carbonate (powder),etc.
- ❖ **Cosmetic industry:** Toothpaste (paste), Face Cream (paste), etc.
- ❖ **Food industry:** Flour (powder), Starch (powder), Salt (powder), Sugar (powder), Fish Balls (paste),etc
- ❖ **Paper making industry:** Paper Factory (paper/sheet), Printing Factory (paper/sheet), Publishing Company (paper/sheet), etc
- ❖ **Textile industry:** Fabric (sheet), Gauze (sheet), Weaving factory (sheet), cotton (clumps), etc.

## Technical Specifications:

| Model               | Bench-top                             |         |  |        |         | Portable                  |                        |
|---------------------|---------------------------------------|---------|--|--------|---------|---------------------------|------------------------|
|                     | WSB-2                                 | WSB-3   | WSB-3A   | WSB-3C | WSB-3AC | WSB-1                     | WSB-1C                 |
| Display             | LCD display                           |         |  |        |         |                           |                        |
| Measurement Range   | 0~100.0                               | 0-200.0 |  |        |         | 0-100.0                   | 0-200.0                |
| Measurement System  | R457 Blue Light Whiteness, opaqueness |         | R457 Blue Light Whiteness, Fluorescence Whiteness Value, opaqueness. |        |         | R457 Blue Light Whiteness | Fluorescence Whiteness |
| Accuracy            | 0.1                                   |         | 0.01   | 0.1    | 0.01    | 0.1                       |                        |
| Zero Draft          | ≤+/-0.1                               |         |  |        |         | ≤±0.1                     |                        |
| Stability           | ≤0.2                                  |         |  |        |         | ≤±1                       |                        |
| Repeatability       | ≤0.2                                  |         | ≤0.1   | ≤0.2   | ≤0.1    | ≤0.2                      |                        |
| Power Supply        | 220V+/-10%, 50Hz+/-10%                |         |  |        |         | Power adapter or battery  |                        |
| Measuring Condition | 45/0                                  |         |  |        |         |                           |                        |
| Packing Size        | 320x256x270mm & 6kg                   |         |  |        |         | 345x385x170mm & 3kg       |                        |



# ZDY-502 Karl Fischer Potential Moisture Titrator

Non-polluting analytic measurement process; Prevent leakage device and prevent suck-back waste device; Automatic inflow and outflow solution, and automatic mixture of KF reagent, which can prevent users from touching KF reagent directly and makes the operation secure and convenient.

- Several titrating modes to meet analysis of different sample: Pre-titration, Auto-titration, Manual titration, Constant titration, KF titer titration, etc.
- Conversational operation, complete the setup and operation of titration easily.
- Convenient automation titration system
  - a. Valve-burette integration design, which is easy replacement and effectively avoid interferences between different solutions in different titration.
  - b. It can set system time, operator No., burette type, burette coefficient, stirrer speed, output types, etc.
  - c. Titration end-point reminder.
- Firmware upgrades function which can reduce your titration cost.
- Control methods of titrator: dot matrix LCD, Key operation, simultaneously or respectively control through computer software
- Live display related test methods and measuring results.
- Several titrating modes: Pre-titration, Auto-titration, Manual titration, Constant titration, KF titer titration, etc.
- Automatic inflow and outflow solution, and automatic mixture of KF reagent, which can prevent users from touching KF reagent directly and makes the operation secure and convenient.
- Titrating solution overflow protection
- It has detecting and reminding functions of KF reagent failure
- USB and RS-232 printing interface. Realize communication through special titrating software by connecting computer.



| Model                |                                     | ZDY-502                                    |
|----------------------|-------------------------------------|--|
| Moisture Measurement | Measuring Range                     | 0.1mg~250mg (mg、mg/L、%、ppm and many units) |
|                      | Resolution                          | 0.1mg                                      |
| Polarization Current | Grade                               | 1 $\mu$ A, 50 $\mu$ A                      |
|                      | Accuracy                            | $\pm 0.2 \mu$ A, $\pm 10 \mu$ A            |
| Titration drive      | Burette Permissible Error           | 10ml burette: $\pm 0.025$ ml               |
|                      | Repeatability of titration analysis | 0.5%                                       |
| Power                |                                     | AC(220 $\pm$ 22)V; (50 $\pm$ 1)Hz          |
| Dimension & Weight   |                                     | 360 $\times$ 300 $\times$ 300mm, 10kg      |

# Halogen Moisture Analyzer

## Application:

Widely used in industrial, agriculture, laboratory applications. Some typical applications are: tobacco, paper, food, tea, corn, chemical, raw materials and textile material, etc.

## Feature:

- \* Halogen light heating.
- \* Stainless steel chamber.
- \* Temperature and time can be set
- \* The percentage of moisture content
- \* The percentage of dry residual
- \* LCD or Touch screen with backlight
- \* Store historical setting.



Touch Screen

## Technical Specifications:

| Model                    | AE-HMA003   | AE-HMA002 | AE-HMA001 | AE-HMA005     |
|--------------------------|---|-----------|-----------|---------------|
| Range (g)                | 110g  |           |           |               |
| Readability (g)          | 0.005   | 0.002     | 0.001     |               |
| Operating Temp.Range     | 5-35°C  |           |           |               |
| Display                  | LCD   |           |           | Touch Screen  |
| Calibration              | External  |           |           |               |
| Pan Size (mm)            | Φ90   |           |           |               |
| Dimensions (WXLXH)       | 200x180x380mm   |           |           | 360X490X350mm |
| Weight (kg)              | 6kg   |           |           |               |
| Heat Source              | Halogen Lamp  |           |           |               |
| Temp.Sensor              | PT-100  |           |           |               |
| Temp.Range               | 40-199°C  |           |           |               |
| Temp.Step                | 1°C   |           |           |               |
| Moisture Range           | 0.00-100%   |           |           |               |
| Moisture Readability     | 0.1%  | 0.04%     | 0.01%     |               |
| Dry Residual Range       | 100.00%-0.00%   |           |           |               |
| Dry Residual Readability | 0.1%  | 0.04%     | 0.01%     |               |
| ATRO                     | 100%-999%   |           |           |               |
| ATRO                     | 0%-999%   |           |           |               |
| Temp.Setting             | 40-199°C by 1°C step                                      |           |           |               |
| Time Setting             | 1-99min by 1s setp  |           |           |               |
| Autostop                 | 0.1%-9.9% within 1min                                     |           |           |               |
| Number of storage        | 15  |           |           |               |
| Heater                   | 220V+/-15% 50Hz, 115V+/-15%, 400W                         |           |           |               |
| Balance                  | External Power Supply, output: 9V, input: 220V+/-15%,50Hz |           |           |               |

# AE-B Series Biological Microscope



AE-B101LED



AE-B102LED/AE-B103LED



AE-B102LEDTR/ AE-B103LEDTR



0.5X/1X C-Mount



Plano-concave mirror



Simple polarizing unit  
Polarizer, analyzer for simple polarizing unit



Dark filed unit available  
for 4x ~ 40x objective



## AE-B Series Biological Microscope Outfits

| Items                      | Specification  | AE-B101LED | AE-B102LED | AE-B103LED |
|----------------------------|--|------------|------------|------------|
| Eyepiece                   | WF 10×-18 mm   | ●          | ●●         | ●●         |
|                            | WF 10×-18 mm(adjustable, 0.1 mm)   | ○          | ○          | ○          |
| Achromatic Objective       | 4×   | ●          | ●          |            |
|                            | 10×  | ●          | ●          |            |
|                            | 40×(S)   | ●          | ●          |            |
|                            | 100×/1.25 (Oil) (S)  | ●          | ●          |            |
|                            | 20×  | ○          | ○          |            |
|                            | 60× (S)  | ○          | ○          |            |
| Plan Objective             | 4×   |            |            | ●          |
|                            | 10×  |            |            | ●          |
|                            | 40×/0.65 (S)   |            |            | ●          |
|                            | 100×/1.25 (Oil) (S)  |            |            | ●          |
| Monocular Head             | Inclined 30°, Rotatable 360°   | ●          |            |            |
| Seidentopf Binocular Head  | Inclined 30°,Rotatable 360°,<br>Interpupillary Distance 48-75mm                              |            | ●          | ●          |
| Seidentopf Trinocular Head | Inclined 30°,Rotatable 360°,<br>Interpupillary Distance 48-75mm,<br>Light Distribution 20:80 | ○          | ○          | ○          |
| Nosepiece                  | Quadplex   | ●          | ●          | ●          |
| Focusing Knobs             | Coaxial Coarse and Fine Focusing Knobs<br>Travel Range: 22mm, Scale: 2μm                     | ●          | ●          | ●          |
| Mechanical Stage           | Stage Size:125mm×115mm,<br>Travel: 35mm×75mm   | ●          | ●          | ●          |
| Condenser                  | Abbe N.A. 1.25(Iris Diaphragm)   | ●          | ●          | ●          |
| Dark Field Ring            | Available For 4×-40× Objective   | ○          | ○          | ○          |
| Polarizing Attachment      | Analyzer / Polarizer   | ○          | ○          | ○          |
| Mirror                     | Plano-concave mirror   | ○          | ○          | ○          |
| C-mount                    | 1×/ 0.5× ( Focus Adjustable )  |            |            |            |
| Base                       | 3WLED Illumination Systems   | ●          | ●          | ●          |
|                            | 3WLED Illumination Systems<br>( rechargeable )   | ○          | ○          | ○          |
|                            | 6V 20W Halogen Lamp,<br>Wide Voltage: 100V-240V  | ○          | ○          | ○          |

Note: "●"In Table Is Standard outfits, "○" Is Optional Accessories.

Packing Size: 337mm×242mm×417mm

Gross Weight: 6.5 kgs

Net Weight: 5.0kgs

# Manual Polarimeter

## Application:

Polarimeter is an instrument which measures the optical rotation of substances. It can be used in analyse the concentration, content & purity of substances.

- ❖ **Agriculture:** Analysis the content of Agriculture Antibiotics, Farm Hormone & Microbial Pesticides.
- ❖ **Medicine:** Analysis Antibiotics, Vitamins, Glucose & Chinese Herbal Medicine or Pharmacological Research.
- ❖ **Food:** Sugar, MSG, Soy Sauce Production Control & Inspection.
- ❖ **Oil:** Analysis Mineral Oil, Monitoring Petroleum Fermentation.
- ❖ **Perfume:** Analysis Essential Oils.
- ❖ **Health:** Analysis Hospital Clinical Diabetes.
- ❖ **Science & Education:** Institutions of higher learning and scientific research departments, scientific research and experimental testing.



## Technical Specifications:

| Model                 | WXG-4  |
|-----------------------|--|
| Type                  | Manual                                       |
| Measurement Range     | -180°~+180°                                  |
| Scale Value           | 1°   |
| Vernier               | 0.05°  |
| Magnifier             | 3X   |
| Transmittance         | 1%   |
| Light Source          | Sodium Lamp plus Filter, Wavelength 589.44nm |
| Sample Tube           | 100mm, 200mm                                 |
| Power Supply          | 220VAC/50Hz                                  |
| Packing Size & Weight | 500(L)×135(W)×330(H)mm & 6.5kg               |

# Manual/Digital Abbe Refractometer

## Characteristic:

- ✧ Measure the refractive index  $n_D$ , the average dispersion  $n_F-n_C$  of transparent or translucent liquid or solid substance and mass fraction (Brix) of cane sugar solution;
- ✧ Wide utilization in the fields as petroleum, oil, pharmaceutical, paint, food, chemical and sugar refining industries, as well as in geological prospecting enterprises, colleges, universities and scientific research institutions;
- ✧ Visual aim; Optical dividing plate reading; Easy and credible.
- ✧ WYA-2S with LCD display and can automatic correction of the effect of temperature on the Brix. Printer interface for direct data print-out.

## Technical Specifications:

| Model   | 2WAJ  | WYA-2W | WYA-2S            |
|---|---|--------|-------------------|
| Refractive index $n_D$<br>Dissolved solids Brix | Refractive index $n_D$ :1.3000-1.7000<br>Dissolved Solids Brix: 0-95% |        |                   |
| Accuracy  | Refractive index $n_D$ : 0.0002<br>Dissolved Solids Brix: 0.1%        |        |                   |
| Temp. Range(Min.0.1°C)                          | 0-50°C  |        |                   |
| Weight (Gross)                                  | 3.5kg   |        | 12kg              |
| Overall Dimensions                              | 200mmx100mmx240mm   |        | 330mmx180mmx380mm |



2WAJ



WYA-2W



WYA-2S

# Portable Refractometers



- ✧ Portable refractometers are very commonly used which can be used for low, middle, and high resolution Brix concentration. The low range can be used for high-precision measurement such as fruit juice, tomato juice, cola and most kinds of beverage. The middle range can be used for concentrated fruit juice, canned food, sugar solution infusions, sauce, ketch up, seasoning and many kinds of industry fluids. The high range is suited for use with food products of high sugar content such as liquid sugar, honey, etc.
- ✧ They can be used for industry fluid testing, such as for vegetable oils, industry, and many other chemical liquids or laboratory use fluids. It provides a fast and accurate way to test the ratio and concentration in water soluble cutting oil and many other industrial fluid.

## Technical Specifications:

|      | Model  | Measure Range | Precision | Temperature |
|------|--------|---------------|-----------|-------------|
| Brix | AE-115 | Brix58-92%    | ±0.5%     |             |
|      | AE-099 | Brix0-18%     | ±0.2%     | ATC         |
|      | AE-117 | Brix0-80%     | ±0.5%     |             |
|      | AE-108 | Brix45-82%    | ±0.5%     |             |
|      | AE-101 | Brix0-90%     | ±0.5%     |             |
|      | AE-102 | Brix0-10%     | ±0.1%     | ATC         |
|      | AE-103 | Brix0-20%     | ±0.1%     | ATC         |
|      | AE-105 | Brix0-32%     | ±0.2%     | ATC         |
|      | AE-106 | Brix0-50%     | ±0.5%     |             |
|      | AE-107 | Brix28-62%    | ±0.2%     | ATC         |

|                      | Model  | Measure Range            | Precision      | Temperature |
|----------------------|--------|--------------------------|----------------|-------------|
| Honey                | AE-112 | 13~25%<br>Honey Moisture | water 0.1%     | ATC         |
|                      | AE-120 | Brix: 58-90%             | Brix: ±0.5%    | ATC         |
|                      |        | Baume: 38-43Be'          | Baume: ±0.5Be' |             |
|                      |        | Water: 10-33%            | Water: ±1%     |             |
| Salinity             | AE-202 | Salinity: 0~28%          | 0.20%          | ATC         |
|                      | AE-201 | Salinity: 0-100‰         | 1‰             | ATC         |
|                      |        | Density: 1.000-1.070     | 0.001          |             |
|                      | AE-206 | Salinity: 0~28%          | 0.20%          | ATC         |
|                      |        | Brix: 0~32%              | 0.20%          |             |
|                      | AE-205 | Salinity: 0-10‰          | 1‰             | ATC         |
| Density: 1.000-1.070 |        | 0.001                    |                |             |
| Brix: 0~10%          |        | 0.20%                    |                |             |

# Digital Refractometer

1. Temperature measurement range: 0°C-40°C(32°F-104°F)
2. Precision of measurement temperature:±0.5°C(1°F)
3. Dimension:135×65×40mm
4. Net Weight:200g
5. Power Supply: 2×AAA(1.5V)
6. Wide choice-over 20 models available
7. Automatic temperature compensation
8. Automatic power management



## Technical Specification:

| Model   | Scale                      | Range         | Divison | Accuracy |
|---------|----------------------------|---------------|---------|----------|
| WZB 35  | Brix (%)                   | 0~35%         | 0.1     | ±0.2     |
|         | Refractiv Index            | 1.3330~1.3900 | 0.0001  | ±0.0003  |
| WZB 45  | Brix (%)                   | 0~45%         | 0.1     | ±0.2     |
|         | Refractiv Index            | 1.3330~1.4098 | 0.0001  | ±0.0003  |
| WZB 65  | Brix (%)                   | 28~65%        | 0.1     | ±0.2     |
|         | Refractiv Index            | 1.3770~1.4535 | 0.0001  | 0.0003   |
| WZB 92  | Brix (%)                   | 58~92%        | 0.1     | ±0.2     |
|         | Refractiv Index            | 1.4370~1.5233 | 0.0001  | ±0.0003  |
| WZB HN1 | Brix (%)                   | 58~92%        | 0.1     | ±0.2     |
|         | °B'e                       | 38~43         | 0.1     | ±0.1     |
|         | Water (IHC2002)            | 13~25         | 0.1     | ±0.1     |
|         | Refractiv Index            | 1.4370~1.5233 | 0.0001  | ±0.0003  |
| WZB HN2 | Brix (%)                   | 58~92%        | 0.1     | ±0.2     |
|         | °B'e                       | 38~43         | 0.1     | ±0.1     |
|         | Water (IHC2002)            | 17~27         | 0.1     | ±0.1     |
|         | Refractiv Index            | 1.4370~1.5233 | 0.0001  | ±0.0003  |
| WZB A1  | salinity                   | 0~28%         | 0.1     | ±0.2     |
|         | Refractiv Index            | 1.3330~1.3900 | 0.0001  | ±0.0003  |
| WZB S1  | Brix (%)                   | 0~35%         | 0.1     | ±0.2     |
|         | salinity                   | 0~28%         | 0.1     | ±0.2     |
| WZB WN1 | Refractiv Index            | 1.3330~1.3900 | 0.0001  | ±0.0003  |
|         | MASS S/W(%)                | 0~35%         | 0.1     | ±0.2     |
|         | VOL AP(%)                  | 0~22%         | 0.1     | ±0.1     |
|         | Oe(Germany)                | 0~150         | 1       | ±1       |
| WZB WN2 | KMW                        | 0~25          | 0.1     | ±0.1     |
|         | MASS S/W (%)               | 0~35%         | 0.1     | ±0.2     |
|         | VOL AP(%)                  | 0~22%         | 0.1     | ±0.1     |
|         | Oe(Germany)                | 30~150        | 1       | ±1       |
| WZB WN3 | KMW                        | 0~25          | 0.1     | ±0.1     |
|         | MASS S/W (%)               | 0~35%         | 0.1     | ±0.2     |
|         | VOL AP(%)                  | 0~22%         | 0.1     | ±0.1     |
|         | Oe(Switzerland)            | 0~150         | 1       | ±1       |
| WZB R1  | KMW                        | 0~25          | 0.1     | ±0.1     |
|         | SERUM P. (g/dl)            | 1.000~1.050   | 0.001   | ±0.001   |
|         | URINE SP.G                 | 0~12g/dl      | 0.1     | ±0.1     |
|         | Refractiv Index            | 1.3330~1.3900 | 0.0001  | ±0.0003  |
| WZB R2  | SERUM P. (g/dl)            | 0~14g/dl      | 0.1     | ±0.1     |
|         | URINE SP.G (dog)           | 1.000~1.060   | 0.001   | ±0.001   |
|         | Refractiv Index            | 1.3330~1.3900 | 0.0001  | ±0.0003  |
| WZB R3  | SERUM P. (g/dl)            | 0~14g/dl      | 0.1     | ±0.1     |
|         | URINE SP.G (cat)           | 1.000~1.060   | 0.001   | ±0.001   |
|         | Refractiv Index            | 1.3330~1.3900 | 0.0001  | ±0.0003  |
| WZB L1  | Alcohol                    | 0~60%v/v      | 0.1     | ±0.3     |
| WZB L2  | Alcohol                    | 0~60%w/w      | 0.1     | ±0.3     |
| WZB K1  | Soybean milk concentration | 0~35%         | 0.1     | ±0.3     |
| WZB C1  | Glycol                     | 32~-50°F      | 0.1°F   | ±1°F     |
|         | Propanediol                | 32~-50°F      | 0.1°F   | ±1°F     |
|         | Battery fluid              | 1.00~1.50sg   | 0.01sg  | ±0.01sg  |
|         | Clearance                  | 0~-40°F       | 0.1°F   | ±1°F     |
| WZB C2  | Glycol                     | 0~-50°C       | 0.1°C   | ±1°C     |
|         | Propanediol                | 0~-50°C       | 0.1°C   | ±1°C     |
|         | Battery fluid              | 1.00~1.50sg   | 0.01sg  | ±0.01sg  |
|         | Clearance                  | 0~-40°C       | 0.1°C   | ±1°C     |
| WZB C3  | Glycol                     | 0~80%         | 0.1%    | ±0.3%    |
|         | Propanediol                | 0~70%         | 0.1%    | ±0.3%    |



# NDJ-5S/8S Digital Rotary Viscometer

## Feature:

NDJ-5S/8S is a new upgrading product of our rotational viscometers. The adoption of advanced mechanical design technology, manufacturing process, microcomputer control technology guarantees accurate data collection; ultra-bright blue backlight LCD display guarantees clear data display. With the microcomputer technology, it is easier to set measuring span(rotor number and rotating speed),take digital process of the data measured by sensor, and clearly display rotor number, rotating speed, viscosity value of the tested liquid and its full-scale percentage on the screen. Beside, its automatic transmission is set for free selection of proper rotating speed or rotor number.



## Function:

This instrument is an instrument to measure absolute viscosity of Newton liquid as well as apparent viscosity of non-Newton liquid featured by flexibility, reliable test, easy operation and beautiful appearance, which is widely applied to grease, paint, plant, plastics, drugs, decorations, coatings and detergent. In addition, NDJ-5S/8S is also added English/Chinese interface for user's selection.

## Technical Specifications:

| Model                   | NDJ-5S                                     | NDJ-8S                       |
|-------------------------|--|------------------------------|
| Measurement range       | 10~1*10 <sup>5</sup> mpa.s                 | 10~2*10 <sup>6</sup> mpa.s   |
| Rotor                   | No.1,No.2,No.3,No.4                        |                              |
| Rotating speed of rotor | 6,12,30,60 rpm                             | 0.3,0.6,1.5,3,6,12,30,60 rpm |
| Measurement tolerance   | ±2%(newton fluid)                          |                              |
| Working condition       | Temperature 5℃-35℃ relative humidity ≤80%  |                              |
| Outline Dmension        | 100mm*140mm*170mm(Ex the base and support) |                              |
| Out Package dimensions  | 475*220*375mm                              |                              |
| Net weight              | 6.8kg(ex the base and support)             |                              |

# Vibrator

## Characteristics:

1. Particle analysis;
2. Widely used in the field of pharmaceutical industry, food, cosmetics, grain;
3. Advanced integrated circuit control;
4. Easy to operate;
5. The sieves is chosen by user.



## Technical Specifications:

| Model                | WQS  |
|----------------------|--|
| Vibration direction: | Vertical vibration   |
| Measurement range:   | ≤325 mesh  |
| Vibration Frequency: | 3000times/min, 6000times/min                                   |
| Amplitude selection: | 0-3mm, continuous adjustment                                   |
| Vibration mode:      | fine vibration; intermittent vibration; continuation vibration |
| Weight (Net):        | 30kg   |
| Overall dimensions:  | 610mm 390mm 400mm  |

# W18 4/8/40mm optional Portable Colorimeter

## Introduction:

Hand-held colorimeter WR18 is years of painstaking development of the high-precision colorimeter, serially developed according to the measuring requirements on different products and gain many optimal achievements with cost performance. It can be applicable in textile, printing and dyeing, clothing, footwear, leather, chemicals, plastics, film, pigments, paints, inks, metal, photography, toys, food

medicine and other liquid, powder and special industry for color quality control, color analysis, sample testing, production line testing, also suitable for injection molding, ink, paint, spray and other color industries. Also extensive used in researching institution and laboratory. It can precisely measure kinds of color index in color space, help to analyze color matching freely and color management, with color analysis software, it will extend more functions.



## Measuring Area Application:

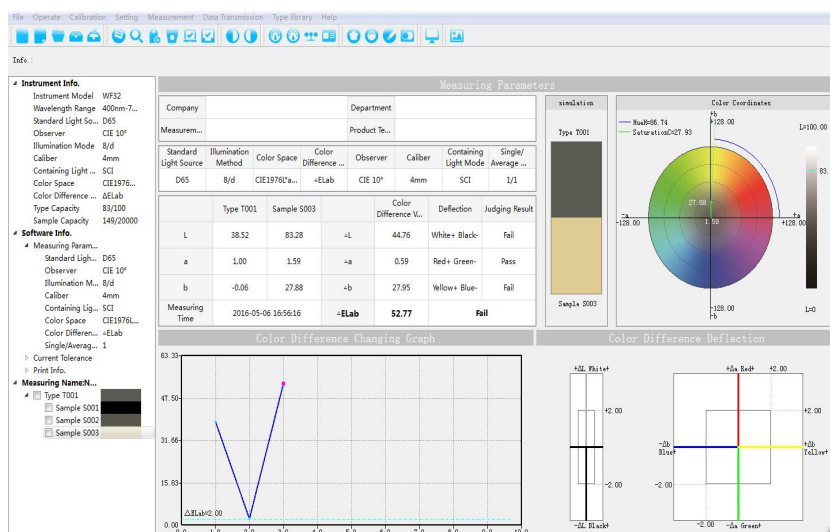
**Caliber 4mm** is specially design, considering small area and curvature measurements. It is suitable for measuring small device, gadget, small parts etc.

**Caliber 8mm** version is a general-purpose color difference meter, mostly used on flat surface materials. It provides great convenience and trustworthy reliability for its versatility, tiny table difference, and stability.

**Caliber 40mm** can be used for huge textured, uneven and pitting surface, also wet sample, like meat, fish...

## Advantages :

1. WR18 can connect with PC, color analysis software is easy to display data and print test results etc.
2. WR18 is with 4mm, 8mm and biggest 40mm alternative aperture, to meet different surface measurement demands.
3. Convenient: automatic correction when starting up, no need to do calibration manually each time. (national patent).
4. Comfortable: observation with real color screen display, handheld and exquisite.
5. Cost-efficient: good performance, stable measurement, low cost.
6. Configuration: rechargeable, high capacity lithium battery.
7. CE & RoHS certification.



**Technical Specifications:**

|                                 |   |
|---------------------------------|---|
| <b>Model</b>                    | <b>WR-18</b>  |
| <b>Color Space</b>              | <b>CIELAB CIELCH CIEXYZ sRGB</b>  |
| <b>Color Difference Formula</b> | $\Delta E^*_{ab}$ $\Delta E^*_{LCH}$  |
| <b>Measurement Caliber</b>      | $\Phi 4\text{mm}/\phi 8\text{mm}$ $\phi 40\text{mm}$ (Optional)   |
| <b>Illumination Condition</b>   | CIE Recommendation: 8/d   |
| <b>Light Source</b>             | <b>D65 A F(CWF)</b>   |
| <b>Sensor</b>                   | Photodiode array  |
| <b>Observer</b>                 | CIE 10° Standard observer   |
| <b>Measurement Range</b>        | L: 0 to 100   |
| <b>Repeated Accuracy</b>        | $\Delta E < 0.06$   |
| <b>Table Difference</b>         | $\Delta E < 0.2$  |
| <b>Measurement Interval</b>     | 0.5 Sec.  |
| <b>Storage Capacity</b>         | Type sample data : 100 groups with testing sample data: <b>200 groups</b>   |
| <b>Lifetime of Bulb</b>         | 5 years more than 1.6 million measurements  |
| <b>Display Screen</b>           | TFT true color 2.8inch@(16:9)   |
| <b>Language</b>                 | English/Simplified Chinese  |
| <b>Interface of External</b>    | USB2.0 (USB-B) RS-232 (115200bps)   |
| <b>Working Temperature</b>      | 0°C-40°C (32°F-104°F)   |
| <b>Storage Temperature</b>      | -20°C-50°C (-4°F-122°F)   |
| <b>Humidity Range</b>           | Relative humidity less than 85%,without condensation  |
| <b>Weight</b>                   | 700g  |
| <b>Size</b>                     | 199*68*90mm   |
| <b>Battery Charging Time</b>    | 8 hrs   |
| <b>Battery</b>                  | Li-ion battery, 5000 times Measurement  |
| <b>Standard Accessories</b>     | AC adapter/ 3000mAH Li-ion battery/User manual/Warranty card/ <b>USB data line/ Color-analysis software/White board</b> |
| <b>Optional Accessories</b>     | Flour measuring device/Micro printer/liquid, powder, pulp accessory   |

# Precision Gloss Meter

WG68 gloss meter is produced according to the national verification regulation of JJG696 standard, adopt long life light source, good repeatability, small volume, high precision and good stability. It is mainly used coatings, printing ink, paint, paint, wood, marble, granite, bo to change polishing brick, brick of pottery and porcelain, plastic, paper, metal and non-metallic materials to the surface of the mirror gloss measurement. WG68 for W G268 upgrade, more stable performance, more durable, more comfortable;

## Gloss meter WG68 functional description

- (1) One button to complete triangle measurement: one operation can complete three angle measurement; Measuring light incident angle meet ISO 2813 three measuring light incident angle. Three incident angle of mirror gloss meter is 20°, 60°, 85° respectively;
- (2) Optional angle mode: choose measuring angle or angle combination according to user needs.
- (3) Manually entering standard samples gloss data;
- (4) Humanized design, good man-machine communication interface;
- (5) Three angle can store 50000 testing records, storage structure is: 100 prototypes, each prototype with 500 testing data;
- (6) Data browsing and viewing function;
- (7) The machine has automatic shutdown function, low power warning functions, full data storage hint functions;
- (8) USB communication interface to communicate with PC;
- (9) PC software can be extended more functions.



## Attachment description

- (1) Power adapter: standard + 5V, 2A external power supply;
- (2) Standard board: provide calibration criterion.
- (3) USB cable: connect instrument to PC.

## WG68 specification:

| Specification             | Unit   | Triangle Gloss Meter                                 | Single Angle Gloss Meter |
|---------------------------|--------|--|--------------------------|
| <b>Model</b>              |        | <b>WG68</b>  | <b>WG60A</b>             |
| Measuring Angle           | degree | 20° 60° 85°  | 60°                      |
| Measuring Range           | GU     | 20°:0-2000, 60°:0-1000, 85°:0-160                    | 60°: 0-1000              |
| Measuring Spot            | mm     | 20°: 10x10, 60°:9x15, 85°:5x18                       | 60°: 9x15                |
| Measuring Spot            | GU     | 0-1000:0.1 1000-2000:1                               |                          |
| Repeatability             | GU     | 0-100:0.2 >100:0.2%                                  |                          |
| Indication Error          | GU     | ±1.5   |                          |
| Zero Error                | GU     | 0.2  |                          |
| Working Temperature Range | °C     | 10°C - 40°C  |                          |
| Storage Temperature Range | °C     | -10°C - 70°C   |                          |
| Humidity Range            |        | Relative humidity less than 85%,without condensation |                          |
| Power Adapter             |        | Section 2 5 alkaline batteries/power adapter         |                          |
| Volume                    | mm     | 159x49x72  |                          |
| Weight                    | g      | 500  |                          |

# Tintometer

## Application:

This instrument is a visual measurement of color matching to determine materials color device. It designed in conformity with internationally accepted color scale of Lovibond. It is used for measuring the color of various products including Oils & Fats, Foods, Liquid, Colloid, Solid, Powder, etc. It can be widely applied to Plastic, Textile, Foods, Marmalade, Resins, Spices, Rubber, etc.

*Transmission Measurement* is fit for liquid & transparent non-ferrous materials.

*Reflection Measurement* is suitable for non-transparent materials.



## Characteristics:

- ❖ Compact in Size & Novel in Design.
- ❖ Succinct Operation & Visual Digit Display.
- ❖ Accord with International Color Scale of Lovibond.
- ❖ Visual Lovibond Digit Display can be quantifying reflected the measurement results.
- ❖ With different size cuvettes & Better observe the visual color effect of various materials.

## Technical Specifications:

| Model                   | WSL-2   |
|-------------------------|---|
| Measurement Range       | Red: R0.1-R79.9 Lovibond Unit<br>Yellow: Y0.1-Y79.9 Lovibond Unit<br>Blue: B0.1-B49.9 Lovibond Unit<br>Neutral: N0.1-N3.9 Lovibond Unit |
| Minimum Readout         | 0.1 Lovibond Unit   |
| Whiteboard Reflectivity | > 80%   |
| Enclosure               | 10mm 25.4mm 133.4mm   |
| Dimension               | 530×440×330mm   |
| Weight                  | 10 kg   |



## ANALYTICAL BALANCE MAGNET SENSOR

The visual appearance of the product is blended into the simple concept, stylish and generous. Specially makes the fine pouring cast- aluminium outer covering, so as to enhance the balance of the anti-static anti-jamming capability. The panel with five operational buttons, Sliding glass windscreen provides big space, insightful vision and operates easily. We use high precision magnet sensor to keep the weighing more fast and stable.



| MODEL             | AE1004                                 | AE1104 | AE1204 | AE2004                | AE2104 | AE2204 |
|-------------------|--|--------|--------|-----------------------|--------|--------|
| Capacity (g)      | 100                                    | 110    | 120    | 200                   | 210    | 220    |
| Price(USD)        |  |        |        |                       |        |        |
| Resolution (g)    | 0.0001                                 |        |        |                       |        |        |
| Min weighing (g)  | 0.0004                                 |        |        |                       |        |        |
| Stable Time       | ≤3 S                                   |        |        |                       |        |        |
| Display           | LCD (white back light with black font) |        |        |                       |        |        |
| Pan Size          | Φ80 mm                                 |        |        |                       |        |        |
| Operation temp    | 5-25° C                                |        |        |                       |        |        |
| Repeatability     | ±0.0002g                               |        |        |                       |        |        |
| Liner             | ± 0.0003g                              |        |        |                       |        |        |
| Draft shield size | 240mmx190mmx265mm                      |        |        |                       |        |        |
| Cal.weight        | 100g                                   |        |        | 200g                  |        |        |
| Option            | RS232C&RS485、Printer                   |        |        |                       |        |        |
| Packing Size      | Inside:415x285x430mm                   |        |        | Outside:475x315x485mm |        |        |
| G.weight          | 10kg                                   |        |        |                       |        |        |

# Laboratory Vacuum Freeze Dryer

## Applications:













Vacuum freeze dryer is widely used in medicine, pharmacy, biology research, chemical industry and food production, etc. After freeze drying processing, a long term preservation for material is much easier. They can be restored to original state and maintain their chemical and biological characteristic after being watered.

\* Types: A: Standard type, B: Top-press type, C: manifold type, D: manifold with top-press type, E: T-type.

## Technical Specifications:

| Model                    |                | AE-FD10  |                  | AE-FD12/12S                             |                  |
|--------------------------|----------------|--|------------------|---|------------------|
| Specifications           | Unit           | Standard                                       | Top-press        | Standard                                | Top-press        |
| Freeze Dryer Area        | m <sup>2</sup> | 0.12   | 0.08             | 0.12                                    | 0.08             |
| Cold Trap Temperature    | °C             | <-56°C (no-loading),option <-80°C (no-loading) |                  |   |                  |
| Vacuum Degree            | Pa             | <10  |                  |   |                  |
| Water-capture Capability | kg/24h         | 3-4  |                  |   |                  |
| Material Tray            | mm             | 200mm,4 layers<br>(6 layers as option )        | 180mm,<br>3 lays | 200mm,4 layers<br>(6 layers as option ) | 180mm,<br>3 lays |
| Power                    | W              | 970  |                  |   |                  |
| Machine Weight           | kg             | 41   |                  | 62                                      |                  |
| Machine Dimension        | mm             | 615x450x370                                    |                  | 580x500x720                             |                  |
| erial (thickness:10mm)   | L              | 1.2L   | 0.8L             | 1.2L                                    | 0.8L             |
| Exiling Bottle           | Piece          | Φ12mm: 920                                     | Φ12mm: 560       | Φ12mm: 920                              | Φ12mm: 560       |
|                          | Piece          | Φ16mm: 480                                     | Φ16mm: 285       | Φ16mm: 480                              | Φ16mm: 285       |
|                          | Piece          | Φ22mm: 260                                     | Φ22mm: 165       | Φ22mm: 260                              | Φ22mm: 165       |

## Machine Photo:

| Model        | A   | B   | C   | D   | E   |
|--------------|---|---|---|---|---|
| Top          |  |  |  |  |  |
| AE-FD10      |  |  |  |  |  |
| AE-FD12 /12S |  |  |  |  |  |

# Food & Pharmaceutical Vacuum Freeze Dryer

## Applications:

The AE-LYO series is used for the freeze-drying of more than 20 kinds of foods such as meat, vegetables, fruits, aquatic products, beans, beverages, soup and health products. Its products meet the requirements of natural, nutritious, and convenient consumption.

Suitable for freeze drying Coptis, Angelica, Fritillaria, Tianma, Honeysuckle, Salvia, Yuanhu, Saffron, Ginseng, American Ginseng, Astragalus, Glycyrrhiza, North Adenophora, Poria, Campanulaceae, Safflower, Paeonia, Peony, Hawthorn, Rehmannia, Gold Lotus, Eucommia ulmoides, wolfberry, yam, ginkgo, gall, porcinea, astragalus, gold buckwheat, Cistanche and other herbal medicines.

AE-LYO Series freeze-drying equipment is based on the rich experience of the aerospace industry in the fields of heat, vacuum, refrigeration, pressure vessel manufacturing & automation technology, and the practice of many years of civilian frozen technology. It also learns from internationally similar equipment technologies.

Low-temperature freeze-drying technology is an ideal method for material dehydration. It can keep the original active ingredients and nutrient components unchanged. After freeze drying, the color, smell, taste and shape will not change, and rehydration can still maintain their original state.

## Technical Parameters: (Square Type Machine)

| Model/Parameters        | Unit           | AE-LYO-1          | AE-LYO-5       | AE-LYO-10      |
|-------------------------|----------------|-------------------|----------------|----------------|
| Freeze Drying Area      | m <sup>2</sup> | 1                 | 5              | 10             |
| Shipping Weight         | kg             | 10                | 50             | 100            |
| Shelf Numbers           | layers         | 4+1               | 7+1            | 9+1            |
| Shelf Dimensions        | mm             | 400*625           | 600*1200       | 1000*1120      |
| Shelf Spacing           | mm             | 60                | 80             | 80             |
| Temperature Range       | °C             | room temp.~+100°C |                |                |
| Ice Collecting Capacity | kg/B           | ≥15               | ≥75            | ≥150           |
| Cold Trap Temp.         | °C             | ≤-60              | ≤-50           | ≤-65           |
| Cooling Mode            | —              | wind cooled       | water cooled   | water cooled   |
| Defrosting Mode         | —              | water soaked      | water soaked   | water soaked   |
| Ultimate Vacuum         | Pa             | ≤5Pa              |                |                |
| Power                   | kw             | 9                 | 20             | 45             |
| Dimensions (L*W*H)      | mm             | 1900*1200*1700    | 2000*3500*2100 | 5000*2000*2500 |
| Weight                  | kg             | 900               | 2500           | 6000           |

## Technical Parameters: (Round Type Machine)

| Models/Parameters        | Unit                    | AE-LYO-15                      | AE-LYO-20      | AE-LYO-30      | AE-LYO-50      | AE-LYO-100      | AE-LYO-200      |  |
|--------------------------|-------------------------|--------------------------------|----------------|----------------|----------------|-----------------|-----------------|--|
| Shelf Area               | m <sup>2</sup>          | 16.2                           | 20.6           | 31.68          | 52.92          | 105.84          | 209.52          |  |
| Shipping Weight          | kg                      | 150                            | 200            | 300            | 500            | 1000            | 2000            |  |
| Shelf Numbers            | layer                   | 9+1                            | 8+1            | 8+1            | 9+1            | 18+1            | 18+1            |  |
| Shelf Dimensions         | mm                      | 1200*1500*15                   | 1200*2150*15   | 1200*3300*15   | 4900*1200*15   | 4900*1200*15    | 9700*1200*15    |  |
| Shelf Spacing            | mm                      | 80                             | 80             | 80             | 80             | 80              | 80              |  |
| Cart Numbers             | set                     | 1                              | 2              | 2              | 3              | 3               | 6               |  |
| Temp. Range              | °C                      | normal temp.~120               |                |                |                |                 |                 |  |
| Ice Collecting Capacity  | kg/B                    | ≥225                           | ≥300           | ≥450           | ≥750           | ≥1500           | ≥3000           |  |
| Cold Trap Temp.          | °C                      | ≤-60                           | ≤-60           | ≤-60           | ≤-50           | ≤-50            | ≤-50            |  |
| Cooling Mode             | -                       | water cooled, water temp.<30°C |                |                |                |                 |                 |  |
| Defrosting Mode          | -                       | Water spraying+ soaking        |                |                |                |                 |                 |  |
| Ultimate Vacuum          | pa                      | <5                             |                |                | <10            |                 |                 |  |
| Power                    | kw                      | 50                             | 96             | 120            | 150            | 230             | 440             |  |
| Water Cooled Consumption | m <sup>3</sup> /h       | 30                             | 40             | 60             | 80             | 160             | 300             |  |
| Compressed Air           | L/min<br>(P=0.5~0.8Mpa) | 20                             | 30             | 30             | 30             | 30              | 30              |  |
| Dimensions(L*W*H)        | mm                      | 5200*1800*3200                 | 6200*2300*3200 | 7500*2300*3200 | 7000*8500*3200 | 7000*11000*3500 | 1200*11000*3500 |  |
| Overall Weight           | t                       | 6                              | 10             | 16             | 29             | 46              | 95              |  |



# NKY6100 Series Fully-automatic Kjeldahl Analyzer

## Product Feature

- \* Titration and distillation are conducted at the same time and the ammonia gas released is neutralized, avoid the overflow of ammonia gas and enhance the test efficiency.
- \* A high-precision micro-metering pump replaces the traditional syringe plunger pump, remarkably improving precision and reducing cleaning work.
- \* the humanized pick & place setting of digestion duct makes it convenient for users to operate.
- \* Diaphragm pump is used to add reagent to avoid injure which can be caused by high-pressure pump.
- \* Imported RGB color sensor technology is adopted to eliminate the disturbance of ambient light and achieve an accurate judgment.
- \* A 8.0-inch LCD touch screen is intended to set distillation time, the amount of diluent, acid liquor and alkali. Such a human-computer interaction interface is easy to operate
- \* Real-time display of titration curve, alerting users to the working condition at any time..
- \* It possesses an all-stage warning system which alerts users to any abnormal working condition at any time.
- \* Wireless network modules is installed, realizing remote data transmission, test data processing and test report printing.
- \* ARM processor is adopted with built-in Flash chip, which is equipped with a file system, enabling users to create or delete folders or files and store 1000 routine data.
- \* It is equipped with a miniprinter so that users can print experimental data according to their need.



## Technical Index

| Parameter Name               | Parameter   |   |  |
|------------------------------|---|---|--|
| Model                        | NKY6180   | NKY6160   | NKY6120  |
| Measurement Range            | 0.1-240mgN  | 0.1-240mgN  | 0.1-200mgN   |
| Function                     | 1. Automatic test module of conventional Nitrogen.<br>2. Automatic test module of Nitrate Nitrogen<br>3. Automatic test module of high Nitrogen   |   | Automatic test module of conventional Nitrogen   |
| Recovery Rate(%)             | ≥99.5%  | ≥99.5%  | ≥99.5%   |
| Distillation Time            | 3-8min/sample   | 3-8min/sample   | 3-8min/sample  |
| Sample                       | Solid≤5g liquid≤25ml  | Solid≤5g liquid≤25ml                                      | Solid≤5g liquid≤25ml   |
| Distillation Mode            | Double distillation mode  | Double distillation mode                                  | conventional distillation mode   |
| Condensate Water Consumption | ≥1.5L/min   | ≥1.5L/min   | ≥1.5L/min  |
| Distillation Power           | 375W-1500W  | 375W-1500W  | 375W-1500W   |
| Titration precision          | 0.0125  | 0.2   | 1  |
| Repeatability                | RSD≤0.3%  | RSD≤0.5%  | RSD≤0.5%   |
| Stored record                | 30000   | 10000   | 5000   |
| Automatic Function           | Automatic sample dilution, addition of acid and alkali, distillation, reaction cup emptying and cleaning; auto correction, calculation and printing. Several conventional methods are equipped.   |   |  |
| Result Determination         | Determined by the terminal color  | Determined by the terminal color                          | Determined by the terminal color   |
| Safety Protection Function   | 1. Level alarm system<br>2. Alarm system monitoring the temperature of vapor generator<br>3. Flow sensor monitors the whole process with the flow velocity be adjusted freely.<br>4. Temperature measurement of distillate<br>5. Acid and alkali resistant polymer composite materials used for the cabinet |   | 1. Level alarm system<br>2. Flow sensor monitors the whole process with the flow velocity be adjusted freely.<br>3. Temperature measurement of distillate<br>4. Acid and alkali resistant polymer composite materials used for the cabinet |
| Optical sensor               | RGB programmable optical sensing technology   | RGB programmable optical sensing technology               | RGB programmable optical sensing technology  |
| Display mode                 | 8.0-inch LCD touch screen   | 8.0-inch LCD touch screen                                 | 8.0-inch LCD touch screen  |
| Titration mode               | Imported high-precision micro-metering pump   |   | high-precision micro-metering pump   |
| Way of distillation          | Distillation and titration are carried out simultaneously   | Distillation and titration are carried out simultaneously | Distillation and titration are carried out simultaneously  |



|                               |  |  |   |
|-------------------------------|--|--|---|
| Steam flow                    | adjustable   | adjustable   | adjustable  |
| Operating Ambient Temperature | 10°C-35°C  | 10°C-35°C  | 10°C-35°C   |
| Water-cooling Device          | Circulatory condensate system                      | /  | /   |
| Language                      | Chinese/English                                    | Chinese/English  | Chinese/English   |
| Power                         | AC220V AC±10% 50Hz                                 | AC220V AC±10% 50Hz   | AC220V AC±10% 50Hz  |
| Rated Power                   | 1500W  | 1500W  | 1500W   |
| External Dimension            | 360x460x680  | 360x460x680  | 360x460x680   |
| Communication Mode            | Network Interface<br>RS232 interface/usb interface | (Enhancement Mode) Network<br>Interface<br>RS232 interface/usb interface | (Enhancement Mode) Network Interface<br>RS232 interface/usb interface |
| Weight                        | About 20kg   | About 20kg   | About 20kg  |

## XTG5000 Series Carbon/Electric Heating Digestion Furnace

### Application:

It has been widely applied to such fields as agriculture, biology, food, chemical industry, pharmacy, tobacco, soil fertilizer, environment, material, scientific research and quality supervision, which can be used to conduct macroanalysis and semimicro-analysis of nitrogen and protein content in the samples like soil, fertilizer, food, crop, medicine, forage, water, chemical product, rubber, material and solid and liquid wastes. It is also adopted to test ammonium salt, volatile phenol, sulfide, alcohol and soil cation exchange capacity.



### Product Features:

- \* Vacuum heating tube is applied which features high heating rate, good temperature uniformity, acid and alkali resistance and is free from short trouble.
- \* nanometer thermal insulating material possesses good insulation effect. Working continuously at the high temperature of 450°C, the surface temperature of the instrument will not exceed 50°C.
- \* PID algorithm is adopted to accurately control the temperature, featuring high heating rate and good thermal insulation.
- \* a layer of Teflon coating on the surface is resistant to such corrosive liquids as acid and alkali which can prevent rust
- \* a 4.3-inch touch screen characterizing easy operation, convenience and understandability
- \* real-time display of temperature curve and heat preservation time at the current temperature phase, which makes it convenient to observe and understand the real-time condition..
- \* data storage function enables the temperature parameters set to store in the storage so that these parameters can be called directly in the future.
- \* multistage temperature setting function, making digesting sample parameter set according to needs
- \* several warning functions which can alert users to the working condition.

### Technical Index

| Parameter Name                      | Parameter                        |                                  |
|-------------------------------------|----------------------------------|----------------------------------|
| Product Model                       | XTG5201                          | XTG5081                          |
| Digestion Hole Number               | 20                               | 8                                |
| Digestion Amount/Sample             | Solid≤5g                         | ≤5g                              |
|                                     | Fluid≤25ml                       | ≤25ml                            |
| Temperature Range                   | Indoor temp-500°C                | Indoor temp-500°C                |
| Heating Material                    | Carbon fiber/vacuum heating wire | Carbon fiber/vacuum heating wire |
| Thermal Insulation Material         | Nano Cloud                       | Nano Cloud                       |
| Heating Method                      | Infrared radiation               | Infrared radiation               |
| Temperature measurement accuracy    | 0.1°C/1°C                        | 0.1°C/1°C                        |
| Rated Power                         | 2200W                            | 1700W                            |
| Weight                              | 20KG                             | 15KG                             |
| External Dimension                  | 580 x 450 x 200                  | 480 x 380 x 200                  |
| Power                               | AC 220±22V 50-60Hz               | AC 220±22V 50-60Hz               |
| Form of Control                     | Touch Screen                     | Touch Screen                     |
| Temperature control accuracy        | ±1°C/±2°C                        | ±1°C/±2°C                        |
| No-load heating up time(20°C-440°C) | 10min                            | 10min                            |



# Water Bath

## Applications:

It applies in the distillation, dry, concentration and thermostatic heating of chemical medicine and biological products in laboratories of fields of medical care units, science and research, chemical industry, pharmacy, petroleum and dyeing and printing etc.

## Characteristics:

1. The case adopts high quality cold-rolled plate and the electrostatic plastic spraying treatment on the surface.
2. The working room and top cover made of imported stainless steel plate. It has many advantages, such as reasonable structure design, strong corrosion resistant, beautiful shape, easy operation and long useful life etc.
3. Optional Analogue temperature control, microcomputer temperature control with temperature control and high precision, stable performance, easy operation and convenience.

## Technical Specifications:

| Model                      | WB-1L1H                | WB-1L2H           | WB-1L4H           | WB-1L6H           | WB-2L2H            | WB-2L4H            | WB-2L6H            |
|----------------------------|------------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| Specification              | 1 Line<br>1 Hole       | 1 Line<br>2 Holes | 1 Line<br>4 Holes | 1 Line<br>6 Holes | 2 Lines<br>2 Holes | 2 Lines<br>4 Holes | 2 Lines<br>6 Holes |
| Power (W)                  | 300                    | 500               | 1000              | 1500              | 1000               | 1500               | 2000               |
| Working Voltage (V)        | AC220V 50Hz, 110V 60Hz |                   |                   |                   |                    |                    |                    |
| Range of temp control (°C) | R.T+10~100             |                   |                   |                   |                    |                    |                    |
| Timer                      | 0~999mins              |                   |                   |                   |                    |                    |                    |
| Wave degree of temp (°C)   | ±1                     |                   |                   |                   |                    |                    |                    |
| Number of Circle Cover     | 5pc/hole               |                   |                   |                   |                    |                    |                    |
| Size of circle cover       | Φ 120/97/75/55/40mm    |                   |                   |                   |                    |                    |                    |
| Volume (L)                 | 2.3                    | 4.3               | 8.4               | 12.7              | 8.5                | 12.5               | 16.1               |
| Size of Working Room(CM)   | 17x17x8                | 32x17x8           | 62x17x8           | 94x17x8           | 32.5x32.5x8        | 48x32.5x8          | 62x32.5x8          |
| Overall dimension (CM)     | 32.5x22x19             | 47.5x22x19        | 77.5x22x19        | 109.5x22x19       | 50.5x37.5x19       | 66x37.5x19         | 80x37.5x19         |
| NW (kg)                    | 4                      | 5.2               | 8                 | 10.1              | 7                  | 8.3                | 10.1               |
| GW (kg)                    | 4.25                   | 6.1               | 9                 | 12.25             | 8.2                | 10.1               | 12                 |



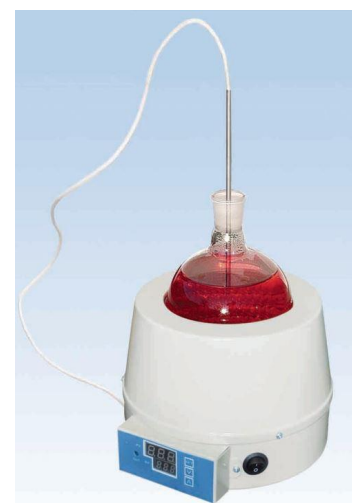
# Heating Mantle

## Applications:

It is the ideal product for heating the liquid in laboratories of the fields of medicine, petroleum, chemical industry, colleges and universities and environmental protection etc.

## Characteristics:

1. It is internally eater in hemisphere shape. It adopts high-temperature resistant alkali-free glass fibre to be insulating material and seal up the nichrome resistive conductor within the insulating layer and braid it.
2. The case adopts the high quality cold-rolled plate and the electrostatic plastic spraying treatment on the surface.  
It has advantages of big heating area, speed hyper-thermic, uniform temperature good hate preservation results and no open fire.
3. Corrosion-resisting, ageing-resistant, durable and solid, safety and reliable.
4. Smart style has a temperature setting, automatic temperature control, digital display of temperature, dual sensor temperature can be measured separately.
5. The digital display type has advantages of temperature setting, automatic temperature control and temperature digital display.
6. Way of heating: (1) Temperature-control(Electronic thermoregulation)  
(2) Intelligent controller



## Technical Specifications:

| Model                                    | HM100                                       | HM250  | HM500    | HM1000   | HM2000   | HM3000   | HM5000   | HM10000  | HM20000  | HM50000     |
|--|---|--------|----------|----------|----------|----------|----------|----------|----------|-------------|
| Specification(ml)                        | 100   | 250    | 500      | 1000     | 2000     | 3000     | 5000     | 10000    | 20000    | 50000       |
| Power(W)                                 | 100   | 180    | 250      | 300      | 500      | 600      | 1000     | 1500     | 2500     | 6000        |
| Linnersize(mm)<br>(DiameterxDeep)        | Φ70x40                                      | Φ95x60 | Φ115x70  | Φ150x85  | Φ185x105 | Φ205x125 | Φ240x146 | Φ310x180 | Φ375x220 | Φ470 or 510 |
| Voltage(V)                               | AC220V 50Hz                                 |        |          |          |          |          |          |          |          |             |
| Max. working temperature(°C)             | 380°C temperature of heating element heater |        |          |          |          |          |          |          |          |             |
| Working time                             | Continuous                                  |        |          |          |          |          |          |          |          |             |
| Overall dimension(mm)<br>(DiameterxHigh) | Φ175x150                                    |        | Φ200x160 | Φ240x175 | Φ280x215 | Φ289x240 | Φ354x270 | Φ414x310 | Φ489x285 | Φ690x475    |
| NW(kg)                                   | 1.3   | 1.3    | 1.8      | 2.7      | 3.7      | 4.2      | 8.25     | 10       | 13       | 42          |
| GW(kg)                                   | 1.5   | 1.5    | 2        | 3        | 4        | 4.5      | 9        | 11       | 14       | 58          |

# Drying Oven

**Microprocessor controller (with timing function)**

**Summary:**

Provided for desiccation, torrefaction, wax-melting and sterilization in mining enterprises, laboratories and scientific research institutes.



**Features:**

- Polished stainless-steel chamber
- Latest PID controller
- Uniform distribution of air temperature
- Forced-air convection
- Double Layer glass door, larger viewing window.
- Independent temperature-limiting alarm system ensures experiments run safely. (option)
- RS485 connector is option which can connect computer to record the parameters and the variations of temperature. (Option)

**Technical Specifications:**

| Model                             | DHG-30A                  | DHG-50A     | DHG-80A     | DHG-136A    | DHG-220A    |
|-----------------------------------|--------------------------|-------------|-------------|-------------|-------------|
| Temperature Range                 | RT+10~200℃ /RT+10℃ ~250℃ |             |             |             |             |
| Display Resolution                | 0.1℃                     |             |             |             |             |
| Temperature Stability             | ±1℃                      |             |             |             |             |
| Ambient Temperature               | +5~40℃                   |             |             |             |             |
| Power Consumption                 | 850W                     |             | 1550W       | 2050W       | 2450W       |
| Chamber Volume                    | 30L                      | 50L         | 80L         | 136L        | 220L        |
| Interior Dimension<br>(WxDxH, mm) | 340x320x320              | 420x395x350 | 450x400x450 | 550x450x550 | 600x500x750 |
| Exterior Dimension<br>(WxDxH, mm) | 620x440x490              | 720x530x520 | 740x530x630 | 840x580x730 | 880x630x930 |
| Shelves                           | 2(pcs)                   |             |             |             |             |
| Timing Range                      | 1~5999min                |             |             |             |             |
| Electrical Requirement            | 220V 50Hz                |             |             |             |             |

| Model                             | DHG-420A                 | DHG-620A     | DHG-1000A     | DHG-420B     | DHG-620B     |
|-----------------------------------|--------------------------|--------------|---------------|--------------|--------------|
| Temperature Range                 | RT+10~200℃ /RT+10℃ ~250℃ |              |               | RT+10~300℃   |              |
| Display Resolution                | 0.1℃                     |              |               |              |              |
| Temperature Stability             | ±1℃                      |              |               |              |              |
| Ambient Temperature               | +5~40℃                   |              |               |              |              |
| Power Consumption                 | 3100W                    | 4000W        | 5200W         | 3100W        | 4000W        |
| Chamber Volume                    | 420L                     | 620L         | 1000L         | 420L         | 620L         |
| Interior Dimension<br>(WxDxH, mm) | 640x585x1355             | 840x600x1355 | 1000x600x1600 | 640x585x1355 | 840x600x1355 |
| Exterior Dimension<br>(WxDxH, mm) | 760x730x1780             | 980x800x1880 | 1400x800x2150 | 760x730x1780 | 980x800x1880 |
| Shelves                           | 3(pcs)                   | 4(pcs)       |               | 3(pcs)       | 4(pcs)       |
| Timing Range                      | 1~5999min                |              |               |              |              |
| Electrical Requirement            | 380V 50Hz                |              |               |              |              |

# Vacuum Oven (not include pump)

**Microprocessor controller (with timing function)**

**Summary:**

Vacuum oven is designed especially for drying of material which is thermo-sensitive or decomposes and oxidative easily. It can be filled with inert gases, which is especially for a rapid drying of some compound material.

**Features:**

- Microprocessor controller
- Dual layer tempered glass door for clear observation
- Minimum heating time 50% less than traditional vacuum oven



**Technical Specifications:**

| Model                   | VA-6050<br>VA-6053<br>VA-6055 | VA-6020<br>VA-6022 | VA-6021<br>VA-6051         | VA-6030A<br>VA-6032<br>VA-6034<br>(for chemistry) | VA-6030B<br>VA-6050B<br>(for biology) |
|-------------------------|-------------------------------|--------------------|----------------------------|---|---------------------------------------|
| Electrical Requirement  | 220V 50HZ                     |                    |                            |   |                                       |
| Power Consumption       | 1450W                         |                    |                            | 550W/850W   | 300W/650W                             |
| Temperature Range       | RT-10~200°C                   |                    |                            |   | RT+10~65°C                            |
| Display Resolution      | 0.1°C                         |                    |                            |   |                                       |
| Temperature Stability   | ±1°C                          |                    |                            |   |                                       |
| Vacuum Degree           | 133Pa                         |                    |                            |   |                                       |
| Vacuum Gauge            | Mechanical pointer            |                    |                            |   |                                       |
| Ambient Temperature     | +5~40°C                       |                    |                            |   |                                       |
| Interior Dimension (mm) | 415x370x345                   | 300x300x275        | 300x300x275<br>415x370x345 | 320x320x300                                       | 320x320x300<br>415x370x345            |
| Exterior Dimension (mm) | 730x560x550                   | 605x490x450        | 605x490x450<br>730x560x550 | 630x510x490                                       | 610x510x490<br>710x560x550            |
| Shelves                 | 2/3/5pcs                      | 1(pcs)/2(pcs)      |                            | 1/2/4(pcs)  | 1(pcs)/2(pcs)                         |
| Chamber Material        | Stainless steel 304           |                    | Cold-rolled sheet(08F)     | Stainless steel 316                               | Stainless steel 304                   |

**Note:** VA-6050,6053,6051,6050B,6032,6022 are inner tank circumscribed heating, other models are shelves heating method.

# Vacuum Oven (Include pump)

**Summary:**

Vacuum oven is designed specially for drying of material which is thermo-sensitive or decomposed and oxidative easily. It can be filled with inert gases, which is especially for a rapid drying of some compound material.

**Features:**

- \* Microprocessor controller
- \* Dual layer tempered glass door for clear observation
- \* Minimum heating time 50% less than traditional vacuum oven

**Technical Specifications:**



| Model                   | VA-6933B   | VA-6503B      | VA-6213<br>VA-6213B | VA-6123<br>VA-6123B | VA-6063<br>VA-6063B | VA-6033<br>VA-6033B |
|-------------------------|--|---------------|---------------------|---------------------|---------------------|---------------------|
| Electrical Requirement  | AC380V 50HZ  |               | AC220V 50HZ         |                     |                     |                     |
| Power Consumption       | 5600W  | 3800W         | 2100W               | 2050W               | 1800W               | 1200W               |
| Temperature Range       | RT+10~200°C  |               |                     |                     |                     |                     |
| Display Resolution      | ±1°C   |               |                     |                     |                     |                     |
| Temperature Stability   | ±1°C   |               |                     |                     |                     |                     |
| Vacuum Degree           | 133Pa  |               |                     |                     |                     |                     |
| Vacuum Gauge            | Imported vacuum gauge/mechanical pointer                         |               |                     |                     |                     |                     |
| Ambient Temperature     | +5~40°C  |               |                     |                     |                     |                     |
| Interior Dimension (mm) | 750x1160x1050  | 630x810x845   | 560x600x640         | 500x500x500         | 400x400x400         | 320x320x320         |
| Exterior Dimension (mm) | 1150x1395x2010   | 790x1030x1855 | 720x820x1750        | 660x640x1400        | 600x570x1390        | 550x490x1240        |
| Shelves                 | 5pcs   | 4pcs          | 3pcs                | 3pcs                | 3pcs                | 2pcs                |
| Chamber Material        | Stainless steel 304  |               |                     |                     |                     |                     |
| Vacuum Pump             | Standard Accessory, if the model with "B" include imported pump. |               |                     |                     |                     |                     |

# Muffle Furnace

## Applications:

This series resistance furnace is discontinuous running type furnace. Can be used in laboratory, industrial and mining factories, industrial and mining factories. R & D institution, academy for metal material, ceramic material firing, some single crystal heat treatment, fireproofing's high temperature testing and common small steel unit quenching, annealing, tempering and some other heating treatment.

## Features:

1. Furnace adopts all ceramic fibre structure, light weight, specific heating capacity little, low consumption, saving more than 70% power.
2. Rising temperature quickly, can adjust rising temperature speed. It should take about 15-30mins from room temperature to 1000°C.
3. The case adopts high quality cold-rolled steel plate with the plastic spraying on the surface. The door adopts side door structure, which easy to open and shut. For safety operating, product the power off device when open the door.
4. Control system adopts high precision PID intelligent instrument which have function such as auto-adjust, revise temperature error, timing, over temperature alarm, control temperature stability, high precision. Also have non-contact circuit is used with the character of low noise and high reliability.

## Technical Specifications:



| Model                               | AE-MF01   | AE-MF02  | AE-MF03   | AE-MF04   | AE-MF05  | AE-MF06   | AE-MF07   | AE-MF08   |
|-------------------------------------|-----------|----------|-----------|-----------|----------|-----------|-----------|-----------|
| Rated Power (KW)                    | 1.5       | 3        | 6         | 1.5       | 3        | 6         | 4         | 8         |
| Rated Temp. (°C)                    | 1000      |          |           | 1200      |          |           | 1300      |           |
| Rated Voltage (V)                   | 220V/50Hz |          | 380V/50Hz | 220V/50Hz |          | 380V/50Hz | 220V/50Hz | 380V/50Hz |
| Phase                               | Single    |          | Three     | Single    |          | Three     | Single    | Three     |
| Temp. Rising time for empty furnace | ≅ 15      |          |           | ≅ 20      |          |           | ≅ 40      |           |
| Cubage (L)                          | 2         | 7        | 16        | 2         | 7        | 16        | 4         | 18        |
| Size of working Room (cm)           | 20x12x8   | 30x20x12 | 40x25x16  | 20x12x8   | 30x20x12 | 40x25x16  | 25x15x10  | 50x20x18  |
| Overall dimension(cm)               | 49x33x47  | 52x41x55 | 69x53x65  | 49x33x47  | 52x41x55 | 69x53x65  | 72x61x75  | 89x73x85  |
| NG/WG (KG)                          | 30/40     | 40/50    | 76/81     | 30/40     | 40/50    | 77/81     | 50/60     | 86/91     |

| Model   | Rated Power (KW) | Rated Temp. (°C) | Rated Voltage | Phase  | Cubage (L) | Size of working room | Overall dimension | Model of equipped controller | NG/WG (kg) |
|---------|------------------|------------------|---------------|--------|------------|----------------------|-------------------|------------------------------|------------|
| AE-BF01 | 2.5              | 1000             | 220V          | Single | 2          | 200x120x80           | 455x600x440       | KSW-6-12                     | 49/52      |
| AE-BF02 | 4                |                  |               | Single | 7          | 300x200x120          | 530x700x500       | KSW-6-12                     | 91/94      |
| AE-BF03 | 8                |                  | 380V          | Three  | 16         | 400x250x160          | 600x900x580       | KSW-12-12                    | 147/153    |
| AE-BF04 | 12               |                  |               | Three  | 30         | 500x300x200          | 670x930x630       | KSW-12-12                    | 197/202    |
| AE-BF05 | 2.5              | 1200             | 220V          | Single | 2          | 200x120x80           | 455x600x440       | KSW-6-16                     | 50/53      |
| AE-BF06 | 5                |                  |               | Single | 7          | 300x200x120          | 530x700x500       | KSW-6-16                     | 91/93.8    |
| AE-BF07 | 10               |                  | 380V          | Three  | 16         | 400x250x160          | 600x900x580       | KSW-12-16                    | 198/201    |
| AE-BF08 | 4                | 1300             | 220V          | Single | 4          | 250x150x100          | 520x680x495       | KSY-6-16                     | 92/96      |
| AE-BF09 | 8                |                  |               | Three  | 18         | 500x200x180          | 600x850x600       | KSY-12-16                    | 68/76      |
| AE-BF10 | 2.5              |                  | 220V          | Single | --         | Φ 22x2               | 600x385x430       | KSY-3-16                     | 20/26.5    |
| AE-BF11 | 2                |                  |               | Single | --         | Φ 22x1               | 600x385x430       | KSY-3-16                     | 21/27      |
| AE-BF12 | 4                | 1000             | 220V          | Single | 8          | 325x200x125          | 590x540x520       | KSW-6-12                     | 68/75      |
| AE-BF13 | 8                | 1600             | 380V          | Single | 5.5        | 300x150x120          | 980x560x880       | --                           | 240/300    |
| AE-BF14 | 12               |                  |               | Single | 13         | 400x200x160          | 1000x770x980      | --                           | 335/400    |



# BOD Incubator/Mold incubator

## Microprocessor controller (with timing function)

### Summary:

Serve for environmental protection, hygiene and anti-epidemic, pharmaceutical test, workstock and aquatic products etc. which applied in scientific research institute, college and manufacture department. It is a dedicated constant-temperature equipment for analysis of water body, BOD test, cultivation and storage of bacteria, moulds and microorganisms, plant cultivation and seed-breeding test.

### Features:

- Polished stainless-steel chamber, semicircular arcs at corners for easy cleaning, and the space between the shelves in the chamber is adjustable.
- Microprocessor temperature controller ensures a precise and reliable control.
- Independent temperature-limiting alarm system ensures experiments run safely.(Option)
- Printer connector and RS485 connector are options which can connect printer and computer to record the parameters and the variations of temperature.(Option)



### Technical Specifications:

| Model                        | BOD Incubator  |              |              |                                 |               |
|------------------------------|--|--------------|--------------|---------------------------------|---------------|
|                              | BOD-70F  | BOD-150F     | BOD-250F     | BOD-500F<br>BOD-800F            | BOD-1000F     |
| Temperature Range            | 0~60℃  |              |              |                                 |               |
| Display Resolution           | 0.1℃   |              |              |                                 |               |
| Temperature Stability        | HIGH±0.5℃ LOW±1.0℃   |              |              |                                 |               |
| Electrical Requirement       | 220V 50Hz  |              |              | 380V 50Hz                       |               |
| Ambient Temperature          | +5℃ ~30℃, ambient temperature is 20℃,and relative humidity is 50%. |              |              |                                 |               |
| Power consumption            | 350W   | 450W         | 650W         | 1500W<br>1800W                  | 2000W         |
| Interior Dimension (WxDxH)mm | 400x350x500  | 503x470x808  | 540x460x808  | 965x580x1430<br>800x700x900     | 900x580x1600  |
| External Dimension (WxDxH)mm | 530x560x1080   | 600x630x1360 | 637x662x1590 | 1000x1100x1860<br>1475x890x1780 | 1410x890x1950 |
| Shelves                      | 2pcs   | 3pcs         |              |                                 |               |
| Timing Range                 | 1~5999min  |              |              |                                 |               |
| Remark                       | “F” is with LCD screen   |              |              |                                 |               |

| Model                        | Mold Incubator   |                         |                         |  |              |
|------------------------------|--|-------------------------|-------------------------|--|--------------|
|                              | MOD-70-I<br>MOD-70F-I  | MOD-150-I<br>MOD-150F-I | MOD-250-I<br>MOD-250F-I | MOD-150-II                                       | MOD-250-II   |
| Temperature Range            | 0~60℃  |                         |                         | With humidity:15~45℃,<br>Without humidity:10~45℃ |              |
| Display Resolution           | 0.1℃   |                         |                         |  |              |
| Temperature Stability        | HIGH±0.5℃ LOW±1.0℃   |                         |                         |  |              |
| Humidity Range               | ---  |                         |                         | 60~85%RH   |              |
| Humidity Stability           | ---  |                         |                         | ±5%~8%RH   |              |
| Electrical Requirement       | 220V 50Hz  |                         |                         |  |              |
| Ambient Temperature          | +5℃ ~30℃, ambient temperature is 20℃,and relative humidity is 50%. |                         |                         |  |              |
| Power consumption            | 350W   | 450W                    | 650W                    | 680W   | 850W         |
| Interior Dimension (WxDxH)mm | 400x350x500  | 500x370x780             | 500x370x800             | 520x460x1050                                     | 600x575x1325 |
| External Dimension (WxDxH)mm | 530x560x1080   | 600x630x1360            | 650x500x830             | 620x690x1590                                     | 750x900x1580 |
| Shelves                      | 2pcs   | 3pcs                    |                         |  |              |
| Timing Range                 | 1~5999min  |                         |                         |  |              |
| Remark                       | Models have “F” is with LCD screen                                 |                         |                         |  |              |

# CO2 Incubator

With imported infrared CO2 Sensor(Professional CO2 Incubator for Cell )

## Features:

- CO2 concentration Restoration Speed
- Polished stainless-steel chamber, semicircular arcs at corners for easy cleaning, and the space between the shelves in the chamber is adjustable.
- Microorganism filter at inlet provides 99% filtration of bacteria and dust (Φ <0.3um) and supplies pure CO2 into the incubator.
- Door temperature controller prevents dewfall on glass door of incubator effectively.
- Independent audible and visible temperature-limiting alarm system ensures experiments run safely.
- Alarm function for temperature difference, CO2 over concentration and concentration difference, door open time, UV working status.
- Auto-controller of fan speed to prevent damage to the samples
- Hot air sterilizing circulation system
- UV light system for periodic sterilization of chamber(Optional)
- RS-485 Connector: easy to download and save all the data via RS-485 into computer, and identify problems in time.
- PID controller with large LCD screen ensures precise and reliable control.



## Technical Specifications:

| Model                         | CO2-50CH(UV)<br>CO2-80CH(UV)            | CO2-150CH(UV)<br>CO2-190CH(UV) | CO2-240CH(UV) | CO2-30CW(UV)<br>CO2-80CW(UV) | CO2-150CW(UV) |
|-------------------------------|---|--------------------------------|---------------|------------------------------|---------------|
| Electrical Requirement        | AC220V 50HZ                             |                                |               |                              |               |
| Power Consumption             | 450W/500W                               | 750W                           | 750W          | 250W/680W                    | 950W          |
| Heating Method                | Gas Inject                              |                                |               | Water Inject                 |               |
| Temperature Range             | RT+5~50°C                               |                                |               |                              |               |
| Ambient Temperature           | +5~30°C                                 |                                |               |                              |               |
| Temperature Stability         | ±0.2°C                                  |                                |               | ±0.1°C                       |               |
| CO2 Range                     | 0-20%                                   |                                |               |                              |               |
| CO2 Control Resolution        | ±0.1%                                   |                                |               |                              |               |
| CO2 Recovery                  | (open door 30seconds back to 5%) ≤ 3min |                                |               |                              |               |
| Temperature Recovery          | (open door 30seconds back to 5%) ≤ 8min |                                |               |                              |               |
| Humidity Method               | natural evaporation ≥ 90%               |                                |               |                              |               |
| Chamber Volume                | 50L/80L                                 | 150L/190L                      | 240L          | 26L/80L                      | 150L          |
| Sterilizer Method             | UV sterilize                            |                                |               |                              |               |
| Interior Dimension (mm) WxDxH | 400x350x350<br>400x450x500              | 480x530x610<br>520x530x690     | 600x630x670   | 290x290x310<br>400x400x500   | 500x500x650   |
| Exterior Dimension (mm) WxDxH | 580x450x540<br>590x657x870              | 670x710x950<br>708x710x1030    | 788x837x940   | 440x410x544<br>550x520x764   | 650x615x914   |
| Shelves                       | 2pcs                                    |                                | 3pcs          | 2pcs                         |               |

| Model                        | CO2-80CRH(UV)                            | CO2-150CRH(UV) | CO2-240CRH(UV) |
|------------------------------|--|----------------|----------------|
| Electrical Requirement       | 220V 50Hz                                |                |                |
| Power Consumption            | 500W                                     | 750W           | 950W           |
| Heating Method               | Air-jacketed, PID Control                |                |                |
| Temperature Range            | RT+5~55°C                                |                |                |
| Ambient Temperature          | RT+5~30°C                                |                |                |
| Temperature Stability        | ±0.1°C                                   |                |                |
| CO2 Range                    | 0~20% V/V                                |                |                |
| CO2 Control Resolution       | ±0.1%(IR sensor)                         |                |                |
| CO2 Recovery                 | (Door open 30s, recovery to 5%) ≤ 3min   |                |                |
| Temperature Recovery         | (Door open 30s, recovery to 37°C) ≤ 8min |                |                |
| Humidity Method              | Natural vaporization > 95%               |                |                |
| Chamber Volume               | 80L                                      | 155L           | 233L           |
| Interior Dimension (mm)WxDxH | 400x450x500                              | 480x530x610    | 600x630x670    |
| Exterior Dimension (mm)WxDxH | 590x687x790                              | 670x767x880    | 788x837x940    |
| Shelves                      | 2pcs                                     | 3pcs           |                |

# Illumination & Climate Incubator

Microprocessor controller (with timing function)

**Summary:**

Widely applied in cultivation of biological histolytic, seed gemmating, breeding test, plant cultivation and feeding of insects and beasties. The incubators can simulate different climatic conditions accurately.

**Features:**

- Microprocessor controller for temperature and humidity ensures of precise and reliable control.
- Simulate changing temperature and light in day/night
- Independent temperature-limiting alarm system ensures experiments run safely.
- Polished stainless-steel chamber, semicircular arcs at corners for easy cleaning, and the space between the shelves in the chamber is adjustable.
- Even air circulation
- Imported compressor
- RS485 connector is option which can connect computer to record the parameters and the variations of temperature.(option)



**Optional Accessories:**

1. RS232/485 interface
2. Micprinter
3. CO2 inlet & CO2 controller (imported IR CO2 sensor)

**Technical Specifications:**

| Parameter                    | Illumination Incubator (Without humidity control) |                     |                                    |                                    |                                    |                                    |
|------------------------------|---|---------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
|                              | ILL-100<br>ILL-100P                               | ILL-250<br>ILL-250P | ILL-300A                           | ILL-300B<br>ILL-350BP              | ILL-400B<br>ILL-450BP              | ILL-800B<br>ILL-800BP              |
| Display Resolution           | 100L  | 250L                | 300L                               | 300L                               | 450L                               | 800L                               |
| Temperature Uniformity       | 220V 50HZ   |                     |                                    |                                    |                                    | 380V 50HZ                          |
| Temperature Uniformity       | 1500W   | 1750W               | 1200W                              | 1450W                              | 2000W                              | 3650W                              |
| Temperature Range            | Without Lighting:4~50℃, With lighting:10~50℃      |                     |                                    |                                    |                                    |                                    |
| Display Resolution           | 0.1℃  |                     |                                    |                                    |                                    |                                    |
| Temperature Stability        | ±1℃   |                     |                                    |                                    |                                    |                                    |
| Temperature Uniformity       | ±1.5℃   |                     |                                    | ±2℃                                |                                    |                                    |
| Ambient Temperature          | +5~30℃  |                     |                                    |                                    |                                    |                                    |
| Continuous Working Time      | No less than 180h                                 |                     |                                    |                                    |                                    |                                    |
| Lighting Intensity           | 0~12000LX<br>Four-grade adjustable                |                     | 0~15000LX<br>Four-grade adjustable | 0~20000LX<br>Four-grade adjustable | 0~25000LX<br>Four-grade adjustable | 0~30000LX<br>Four-grade adjustable |
| Interior Dimension (WxDxH)mm | 550×400×550                                       | 600×610×830         | 520×550×1140                       |                                    | 700×550×1140                       | 965×580×1430                       |
| Exterio Dimension (WxDxH)mm  | 650×800×1310                                      | 760×815×1550        | 830×850×1850                       |                                    | 950×850×1850                       | 1475×890×1780                      |
| Shelves                      | 3PCS  |                     |                                    |                                    |                                    |                                    |
| Remark                       | With "P" model, the machine programming control   |                     |                                    |                                    |                                    |                                    |

| Parameter                    | Climate Incubator (With humidity control)       |                                     |                                     |
|------------------------------|---|-------------------------------------|-------------------------------------|
|                              | CLL-300H<br>CLL-350HP                           | CLL-400H<br>CLL-450HP               | CLL-800H<br>CLL-850HP               |
| Display Resolution           | 300L  | 450L                                | 800L                                |
| Temperature Uniformity       | 220V 50HZ                                       |                                     | 380V 50HZ                           |
| Temperature Uniformity       | 1500W   | 2050W                               | 4100W/3700W                         |
| Temperature Range            | Without Lighting:4~50℃, With lighting:10~50℃    |                                     |                                     |
| Display Resolution           | 0.1℃  |                                     |                                     |
| Temperature Stability        | ±1℃   |                                     |                                     |
| Temperature Uniformity       | ±2℃   |                                     |                                     |
| Ambient Temperature          | +5~30℃  |                                     |                                     |
| Humidity Range               | 50~90%RH  |                                     |                                     |
| Humidity Accuracy            | ±5~7%RH   |                                     |                                     |
| Continuous Working Time      | No less than 180h                               |                                     |                                     |
| Lighting Intensity           | 0~20000LX,<br>Four-grade adjustable             | 0~25000LX,<br>Four-grade adjustable | 0~30000LX,<br>Four-grade adjustable |
| Interior Dimension (WxDxH)mm | 520×550×1140                                    | 700×550×1140                        | 965×580×1430                        |
| Exterio Dimension (WxDxH)mm  | 830×850×1850                                    | 950×850×1850                        | 1475×890×1780                       |
| Shelves                      | 3PCS  |                                     |                                     |
| Remark                       | With "P" model, the machine programming control |                                     |                                     |

# Laminar Flow Cabinet/Clean Bench



## LCD Display

Airflow velocity, UV timer, UV work time, system work time, real time.



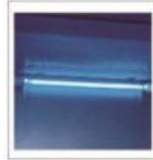
## Waterproof Socket

2 waterproof sockets are located in the side panel, for optimum convenience of using small devices inside the cabinet.



## Side Glass Window

The transparent side glass windows maximize light and visibility inside the cabinet. Providing a bright and open working environment



## UV Lamp

Emission of 253.7 nanometers for most efficient decontamination.



## Gas Tap



## Technical Parameter

| Model                 | AE-CB1300  | AE-CB1800       |
|-----------------------|--|-----------------|
| External Size (WxDxH) | 1310x750x2040mm  | 1800x750x2040mm |
| Internal Size (WxDxH) | 1200x645x610mm   | 1700x645x610mm  |
| Work surface height   | 750mm  |                 |
| Display               | LCDdisplay   |                 |
| Airflow Velocity      | Average of 0.3~0.5m/s  |                 |
| Material              | Main body: cold-rolled steel with anti-bacteris powder coating<br>Work table: 304 stainless steel<br>Side and front windows: 5mm toughened glass anti-UV |                 |
| Pre-filter            | Polyester fiber, washable  |                 |
| HEPA Filter           | 99.999% efficiency at 0.3um  |                 |
| Noise                 | <60dB  |                 |
| Front window          | motorized  |                 |
| Max opening           | 430mm  |                 |
| Fluorescent lamp      | 28Wx1  | 36Wx1           |
| UV Lamp               | 30Wx1  | 40Wx1           |
|                       | Emission of 253.7 nanometers   |                 |
| Consumption           | 400W   | 450W            |
| Waterproof socket     | Two, total load ≤ 500W   |                 |
| Caster                | Universal caster with leveling feet  |                 |
| Power supply          | AC220V ± 10%, 50/60Hz, 110V ± 10%, 60Hz  |                 |
| Standard accessory    | Fluorescent lamp, UV lamp x2, base stand, Gas Tap, Waterproof socketx2   |                 |
| Gross weight          | 228kg  | 306kg           |
| Packing size (WxDxH)  | 1460x1070x1650mm   | 1960x970x1600mm |

# Fume Hood

## Advantage:

1. It is safer to use anti-corrosive water tap.
2. Microprocessor control system, LCD display.
3. Made of porcelain white PP, resistant to strong acid, alkali and anti-corrosion.
4. Front window which is made of thick transparent toughened glass maximize light and visibility inside the fume hood, providing a bright and open working environment.



LCD Display



Waterproof Socket



PP Sink  
resistant to strong  
acid, alkali and  
anti-corrosion



Water&Gas  
Remote Control



## Technical Parameters:

| Model                 | AE-FH1000A  | AE-FH1200A      | AE-FH1500A      | AE-FH1800A      |
|-----------------------|---|-----------------|-----------------|-----------------|
| External Size (WxDxH) | 1040x750x2200mm   | 1240x800x2200mm | 1540x800x2200mm | 1840x800x2200mm |
| Internal Size (WxDxH) | 820x520x872mm   | 1020x570x872mm  | 1320x570x872mm  | 1620x570x872mm  |
| Work Surface Height   | 700mm   |                 |                 |                 |
| Max. Opening          | 815mm   |                 |                 |                 |
| Air Velocity          | 0.4-0.6m/s  |                 |                 |                 |
| Noise                 | ≦ 60dB  |                 |                 |                 |
| Fluorescent Lamp      | 12Wx1   | 30Wx2           | 30Wx2           | 30Wx2           |
| Blower                | Built-in axial flow blower, speed adjustable  |                 |                 |                 |
| Front Window          | Manual, 5mm toughened glass, height adjustable.   |                 |                 |                 |
| Power Supply          | AC220V+/-10%, 50/60Hz, AC110V+/-10%, 50/60Hz  |                 |                 |                 |
| Consumption           | 330W  | 360W            | 360W            | 360W            |
| Material              | Main body: made of porcelain white PP, thickness 8mm, resistant to strong acid, alkali and anti-corrosion. Work Table: chemical resistant phenolic resin. |                 |                 |                 |
| Standard accessory    | Fluorescent lamp, water tap, water sink, base cabinet.<br>Waterproof socketx2<br>4 meters PVC duck, diameter: 250mm                                       |                 |                 |                 |
| Optional accessory    | PP work table, epoxy resin board or ceramic board.<br>Outer centrifugal blower, resistant to strong acid, alkali.   |                 |                 |                 |
| Gross Weight          | 160kg   | 198kg           | 225kg           | 259kg           |
| Package Size          | Main Body   | 1110x900x1870mm | 1310x885x1575mm | 1610x885x1575mm |
|                       | Base Cabinet  | 1110x790x950mm  | 1310x840x950mm  | 1610x840x950mm  |



# Flake Ice Machine

## Features:

- \* Flake Ice
- \* Air Cooling
- \* Stainless Steel 304 Exterior
- \* Adjustable Feet
- \* Slide Away Access Door
- \* World Famous Brand Compressor
- \* Fully Automatic Controller
- \* Improved Design For Higher Reliability



## Technical Specifications:

| Model:                                    | AE-IMS100                              | AE-IMS120 | AE-IMS150 | AE-IMS20                              | AE-IMS30 | AE-IMS40                              | AE-IMS50 |
|---|--|-----------|-----------|---------------------------------------|----------|---------------------------------------|----------|
| Ice Making Capacity:Kg/24h                | 100Kg/24h                              | 120Kg/24h | 150Kg/24h | 20Kg/24h                              | 30Kg/24h | 40Kg/24h                              | 50Kg/24h |
| Ice Storage:                              | 40Kg                                   | 40Kg      | 40Kg      | 10Kg                                  | 10Kg     | 15Kg                                  | 15Kg     |
| Voltage:                                  | 220V/50Hz or 110V/60Hz                 |           |           | 220V/50Hz or 110V/60Hz                |          | 220V/50Hz or 110V/60Hz                |          |
| Power:                                    | 520W                                   | 550W      | 680W      | 280W                                  | 300W     | 360W                                  | 380W     |
| Cooling type:                             | Air Cooling                            |           |           | Air Cooling                           |          | Air Cooling                           |          |
| Refrigerant:                              | R134a                                  |           |           | R134a                                 |          | R134a                                 |          |
| Water Supply:                             | Tap Water                              |           |           | Tap Water                             |          | Tap Water                             |          |
| Net Weight: Kg/Lb                         | 58/127.9                               | 58/127.9  | 60/132.3  | 28/61.7                               | 28/61.7  | 36/79.4                               | 36/79.4  |
| Gross Weight: Kg/Lb                       | 63/138.9                               | 63/138.9  | 65/143.3  | 31/68.3                               | 31/68.3  | 39/86.0                               | 39/86.0  |
| Product Dimension:<br>(mm) W*D*H (inch)   | 500 * 611 * 940<br>19.7 * 24.1 * 37.0  |           |           | 330 * 470 * 605<br>13.0 * 18.5 * 23.8 |          | 400 * 543 * 720<br>15.7 * 21.4 * 28.3 |          |
| Packaging Dimension:<br>(mm) W*D*H (inch) | 570 * 685 * 1000<br>22.4 * 27.0 * 39.4 |           |           | 405 * 555 * 665<br>15.9 * 21.9 * 26.2 |          | 470 * 615 * 780<br>18.5 * 24.2 * 30.7 |          |





## Dissolution Tester

RC series of instruments are used for detecting velocity and extent of pharomic dissolution from tablet, capsule etc in prescriptive menstruum.

### Applicable standards:

National standard (Chinese codex) / 2015

Industry standard (Dissolution tester)

### Features:

It has six vessels and six poles arranged on one line.

The head part of the instrument can be artificially turned over smoothly and flexibly.

The basket units and paddle units are made of imported stainless steel (SUS316L).

The magnetism-pumped circular water current can heat the system evenly, and the bath liquid can achieve an equal temperature.

A MPU is used in dissolution tester to automatically control the temperature, rotational speed and time, and the parameters can be preset at any time.

It can be operated conveniently by keystroke. The measurement result is displayed by LED. The preset and real data can be displayed alternately in time.

Automation: auto-test, auto-diagnose, auto-alarm.

It can test by self and alarm automatically. The dissolution parameters of Chinese codex are stored in and can be taken out at anytime.

Time can be preset at many points. The beeper sounds automatically to any point, and then the tester automatically runs to the next one.

### Specifications:

Speed range (20~200)rpm

Speed accuracy  $\pm 2$ rpm

Temperature range ambient to  $+45.0^{\circ}\text{C}$

Temperature Stability  $\pm 0.3^{\circ}\text{C}$

Preset timing nine points (1~999)min

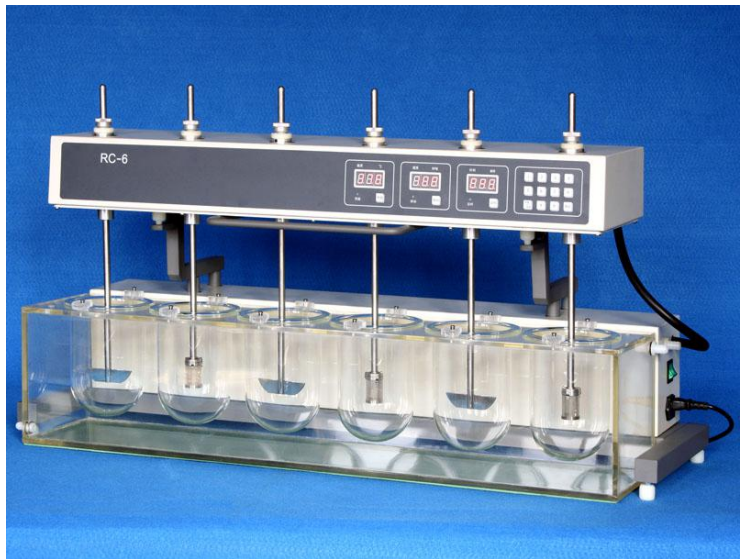
Time accuracy  $\pm 0.3\%$

Paddle radial run-out  $\pm 0.5$ mm

Basket radial run-out  $\pm 1.0$ mm

Power 220V/50Hz/1200W or 110V/60Hz/1200W

Dimension (960\*320\*480)mm<sup>3</sup>



## Disintegration Tester

BJ series of instruments are used for detecting disintegration of solid in prescriptive conditions.

### Applicable standards:

National standard (Chinese codex) / 2015

Industry standard (Disintegration tester)

### Features:

There are eighteen tubes in three basket assembly.

Each test station is driven independently. Auto stop at timing point.

The bath liquid can achieve an even temperature.

A MPU is used to automatically control the temperature, time and frequency of nacelle back and forth.

Timing at will. The preset and real time data can be displayed alternately in time.

Automation: auto-test, auto-diagnose, auto-alarm.

### Specifications:

Basket assembly 3

Nacelle back and forth frequency (30~32) /min

Nacelle back and forth range (55±2)mm

Automatic time range (1~900)min

Accuracy of controlling temperature (37±0.5)°C

Power 220V/ 50Hz/ 600W or 110V/ 60Hz/ 600W

Dimension (540×300×420)mm<sup>3</sup>



# Tablet Friability Tester

CS series of instruments are used for detecting friability/ abrasion of tablet.

## Applicable standards:

National standard (Chinese codex) / 2015

Industry standard (Tablet friability tester)

## Features:

Two drums run synchronously. Auto stop at timing point.

The drum is made of high quality hyaline acryl.

The revolution of the drum can be preset at any time, either preset or real data is displayed on the LED.

A MPU is used to control all operations, high accuracy is achieved in testing rotary speed and circle number.

Automation: auto-test, auto-diagnose, auto-alarm.

## Specifications:

Cylinder number 2

Cylinder radius  $\Phi 286\text{mm}$

Cylinder depth 39mm

Tablet fall height 156mm

Rotation speed 25rpm

Rotation Speed accuracy  $\pm 1\text{rpm}$

Rotation count (10~900)r

Rotation count accuracy  $\pm 1\text{r}$

Power 220V/ 50Hz/ 40W or 110V/ 60Hz/ 40W

Dimension (360×300×340)mm<sup>3</sup>





## Tablet Hardness Tester

Tablet hardness testers are instruments for detecting breaking hardness of tablet.

### Applicable standards:

Industry standard (Tablet hardness tester)

### Features:

The tablet is loaded artificially and pressed automatically.

There is high accuracy press sensor and hardness data is displayed on LED.

It tests tablet hardness continuously. The biggest number is 100 pieces of a gang.

Time of testing will be saved by directly measuring the diameter.

Test data is displayed and locked automatically, so can test be reset and cycled.

It can deal with and print out such data as: hardness of each tablet, the maximum value, the minimal value, the average value and the number of tablets.

The parameters can be preset at any time. Either preset or real data is displayed on the LED.

Automation: auto-test, auto-diagnose, auto-alarm.

### Specifications:

Hardness range (2~199.9)N

Hardness accuracy  $\pm 1.5\%$

Probe procession range (3~40)mm

Test period  $\nabla 20S/P$

Max number in each group 100P

Power 220V/ 50Hz/ 60W or 110V/ 60Hz/ 60W

Dimension (500\*300\*160)mm<sup>3</sup>



# Oxygen Bomb Calorimeter

## Summary

The instrument is designed and made as per the National Standard of People's Republic of China *GB/T213-2008 Test Method for Calorific Value of coal*, *GB/T384-1988 Test Method for Calorific Value of Petroleum Products* and Calibration Regulation of People's Republic of China *JJG672-2001 Oxygen Bomb Calorimeter*, as well as Enterprise Standard of Shanghai *Q/YXYY 10 XRY Series Oxygen Bomb Calorimeter*.

The heat capacity of the instrument is 14000 J/K ~ 15000 J/K, and it is suitable to determine calorific value of combustible materials such as petroleum products without water (gasoline, jet fuels, diesel oil and fuel oils, etc.), coal, coke and paraffin, etc.

## I. Main technical features

1. This instrument adopts sealed oxygen bomb. The whole structure adopts stainless steel material. The strength is enough to resist the max pressure (60~70 atmospheric pressure) when the solid burning. And it can resist the bigger pressure when liquid fuel burning.
2. The inner water cylinder is composed of stainless steel sheet. The cross section is pyriform and the capacity is 3kg. The water cylinder is equipped with electric stirrer inside. It ensures the temperature in the water cylinder uniform.
3. The external water jacket is double layer container. It filled with water when doing determination. It make the water temperature in the cylinder uniform by water jacket stirrer and form the constant temperature environment meeting the requirements of test.

## II. Main technical specifications

1. Heat capacity: 14400 J/K ~ 15000 J/K
2. Resolution: 0.001 K
3. Measurement accuracy:  $\pm 60$ J/g
4. Repeatability :  $\leq 0.2\%$  (Grade C)
5. Pressure endurance of oxygen bomb: 20 MPa
6. Temperature measurement range: 10 °C ~ 35 °C
7. Ambient temperature: 20 $\pm$ 5 °C, the fluctuation is not more than 1 °C during one test
8. Data saved: 31 pieces
9. Relative humidity:  $\leq 85\%$
10. Power supply: AC 220V $\pm$ 5%, 50 Hz
11. Dimension: 600mm  $\times$  460mm  $\times$  430mm

(Note: Pellet press machine is optional accessory)



# Rotary Vacuum Pump



## Summary of use:

It applies in refrigeration, electronic bulb industry, printing, pharmacy, food packing, medical treatment, instrument chemical industry; semiconductor vacuum steam analysis and physical-chemical experiment etc.

## Characteristics:

1. 2XZ series of vacuum pump is the rotary slice pump with dipole unit construction structure. It could exhaust air and vacuum the equipment serialize the process of refrigeration, drying and sealing of container to make it complete
2. The advantages of small volume, light weight, low noise and easy to operate etc. (This series of product could not be used as compressor pump or delivery pump).

## Major technical parameters :

| Model                          | 2XZ-0.5            | 2XZ-1       | 2XZ-2       | 2XZ-4       | 2XZ-6              | 2XZ-8       | 2XZ-15      | 2XZ-25      |
|--------------------------------|--------------------|-------------|-------------|-------------|--------------------|-------------|-------------|-------------|
| Speed of exhaust (L/S)         | 0.5                | 1           | 2           | 4           | 6                  | 8           | 15          | 25          |
| Ultimate Vacuum(pa)            | 6x10 <sup>-2</sup> |             |             |             | 6x10 <sup>-2</sup> |             |             |             |
| Speed (r/min)                  | 1400               |             |             |             | 1400               |             |             |             |
| Voltage (V)                    | AC220V 50Hz        |             |             |             | AC380V 50Hz        |             |             |             |
| Power (KW)                     | 0.18               | 0.25        | 0.37        | 0.55        | 0.75               | 1.1         | 1.5         | 3           |
| Overall dimension (mm) (LxWxH) | 460x130x250        |             | 480x145x265 | 530x145x265 | 542x196 x<br>332   | 646x236x390 | 706x236x390 | 786x276x470 |
| NW/GW (kg)                     | 15.6 / 21.2        | 17.2 / 22.8 | 22.5 / 28.5 | 26 / 33     | 40/ 50             | 70 / 82     | 80/95       | 94/110      |