

## Automatic ELISA Processor BIOBASE4001



### Introduction:

Automatic ELISA Processor BIOBASE4001 is a fully automatic detection equipment that integrates sample addition, incubation, shaking, washing, and reading. It is widely used in hospital laboratories, disease prevention and control centers, blood centers, and blood banks, animal and plant inspection and quarantine institutions, scientific research institutions, university laboratories and other places.

### Features:

- ① Adopt the principle of pressure type liquid detection.
- ② With TIP detection, clot detection function.
- ③ High-precision pipetting, the lowest volume can reach 5ul.
- ④ Position sensing, real-time monitoring of gripper status.
- ⑤ Multi-spacing and multi-strength adjustable grippers can be adapted to grasp and place microplates and plate covers of different sizes.
- ⑥ Dual thread control, can run simultaneously with the sampling arm without interfering with each other.

### Sampling Module

Disposable TIP design, high precision, zero carry-over pollution.  
4 injection channels are independently controlled, and each channel runs independently in Y-Z direction.  
With liquid level detection, TIP head detection, clot detection and other detection and alarm functions.

### Smart Gripper Module

Safe, reliable, stable, efficient, fast and accurate gripper.  
With position sensing system.  
Real-time monitoring of the grabbing process to prevent falling.

### Shaking Incubation Module

12 independent temperature-controlled shaking incubation modules.  
3-level shaking.  
Temperature range: RT~60°C.  
Plate cover design to avoid strong light interference.

### Microplate Washer Module

2 independent microplate washers, 16-channel (32-pin) washer head, 5-way cleaning solution.  
Injection uniformity CV < 1.5%, residual volume < 1µL/well.  
Program adjustable, applicable to microplates of different sizes.

### Microplate Reader Module

Built-in high-precision microplate reader.  
Single and dual wavelength detection, ten filter positions.  
Wide absorbance range, high sensitivity, good repeatability and strong stability.

### Parameters:

| Model                 | BIOBASE4001             |                                                                                           |
|-----------------------|-------------------------|-------------------------------------------------------------------------------------------|
| Sample & Reagent Unit | Sample Racks            | 12*16 push-pull sample rack with detection                                                |
|                       | Sampling Channel        | 4 channels                                                                                |
|                       | Liquid Level Detection  | Air pressure level detection, clot detection function                                     |
|                       | TIP                     | 1000µl, 5 TIP racks                                                                       |
|                       | Pipetting               | 5µl~1000µl                                                                                |
| Washing Unit          | Pipetting Precision     | 100µl: CV≤0.5%, Accuracy≤2.0%<br>1000µl: CV≤0.5%, Accuracy≤0.5%                           |
|                       | Reagent Position        | 6 Reagent racks, reagent tanks with detection                                             |
|                       | Washer                  | 2 units                                                                                   |
|                       | Washing Head            | 16-channel (32-pin), double row cleaning, hanging installation, with leakage recovery     |
|                       | Injection Uniformity    | CV < 1.5%                                                                                 |
| Reading Unit          | Washing Residual        | <1µl                                                                                      |
|                       | Reading Channels        | 8 independent photometric channels, mono and dichromatic reading                          |
|                       | Linear Range            | 0.000-3.000Abs                                                                            |
|                       | Repeatability           | CV≤1.0%                                                                                   |
|                       | Stability               | ≤±0.003Abs                                                                                |
| Incubation Unit       | Optical Filters         | 4 standard filters (405,450,492,630nm); Total 10 filters positions                        |
|                       | Reading Accuracy        | ≤±0.02Abs from 0.0 to 1.0 OD, ≤±0.03Abs from 1.0 to 2.0 OD                                |
|                       | Sensitivity             | ≥0.01mg/L                                                                                 |
|                       | Channel Difference      | ≤0.02Abs                                                                                  |
|                       | Incubators              | 12 shaking incubators                                                                     |
| Data Management       | Cover Positions         | 2 (12 covers)                                                                             |
|                       | Heating Method          | Dry heating with cover                                                                    |
|                       | Shaking Function        | Horizontal circular oscillation, 1-3 levels adjustable, amplitude 2.5mm                   |
|                       | Temperature Range       | RT to 60 °C                                                                               |
|                       | Temperature Uniformity  | 0.5°C                                                                                     |
| Other Function        | Temperature Fluctuation | ±0.5°C                                                                                    |
|                       | Software                | Above Windows 7 system                                                                    |
|                       | LIS System              | Bi-direction, support HL7 protocol                                                        |
|                       | Results                 | Absorbance and results reviewable by software                                             |
|                       | Printer                 | External optional                                                                         |
| Working Condition     | Built-in Scanner        | Optional                                                                                  |
|                       | Biosafety Protection    | Optional (Negative pressure working zone, HEPA filter)                                    |
|                       | Disinfection            | UV lamp                                                                                   |
|                       | Lighting                | LED                                                                                       |
|                       | IAP Function            | Firmware can be upgraded online at any time                                               |
| Size & Weight         | Power Supply            | AC220V±10%, 50/60Hz(Standard); 110V±10%, 60Hz( Optional)                                  |
|                       | Temperature             | 10~40°C                                                                                   |
|                       | Humidity                | 30~80%                                                                                    |
|                       | External Size (W*D*H)   | 1775*790*1683mm                                                                           |
|                       | Net Weight              | 445kg                                                                                     |
| Size & Weight         | Package Size(W*D*H)     | Machine: 1945*950*1150mm; Base Stand: 1945*950*995mm                                      |
|                       | Gross Weight            | Accessories: 1370*930*530mm<br>Machine: 364.5 kg; Base stand: 208.5 kg; Accessories: 97kg |