

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 5 μ l.
- 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 < 1 μ l/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	1000 μ l, 5 TIP racks
	Pipetting	5 μ l~1000 μ l
	Pipetting Precision	100 μ l: CV \leq 0.5%, Accuracy \leq 2.0% 1000 μ l: CV \leq 0.5%, Accuracy \leq 0.5%
Washing Unit	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	<1 μ l
	Reading Channels	8 independent photometric channels, mono and dichromatic reading
	Linear Range	0.000-3.000Abs
	Repeatability	CV \leq 1.0%
	Stability	\leq \pm 0.003Abs
	Optical Filters	4 standard filters (405,450,492,630nm); Total 10 filters positions
	Reading Accuracy	\leq \pm 0.02Abs from 0.0 to 1.0 OD, \leq \pm 0.03Abs from 1.0 to 2.0 OD
	Sensitivity	\geq 0.01mg/L
	Channel Difference	\leq 0.02Abs
	Incubation Unit	Incubators
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
Data Management	Temperature Fluctuation	\pm 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
Other Function	Built-in Scanner	Optional
	Biosafety Protection	Optional (Negative pressure working zone, HEPA filter)
	Disinfection	UV lamp
Working Condition	Lighting	LED
	IAP Function	Firmware can be upgraded online at any time
	Power Supply	AC220V \pm 10%, 50/60Hz(Standard); 110V \pm 10%, 60Hz(Optional)
	Temperature	10~40°C
Size & Weight	Humidity	30~80%
	External Size (W*D*H)	1775*790*1683mm
	Net Weight	445kg
	Package Size(W*D*H)	Machine: 1945*950*1150mm; Base Stand: 1945*950*995mm Accessories: 1370*930*530mm
	Gross Weight	Machine: 364.5 kg; Base stand: 208.5 kg; Accessories: 97kg