

# SuPerMax 3100 Multi-Mode Microplate Reader

——Designed for high-throughput drug screening laboratories

Shanghai Flash Spectrum Biotechnology Co., Ltd. was the first manufacturer of grating microplate reader in China, intimately cooperated with Fudan University and Shanghai Jiaotong University, was established at Shanghai Bioengineering Center of Chinese Academy of Sciences. We committed to providing ultra- accurate, ultra-throughput, ultra-performance professional microplate readers for research of clinical, life sciences and pharmacy. **SuPerMax** series has been widely used in organic chemistry, clinical diagnosis, drug screening, molecular biology, immunobiology, cell biology, biochemistry, environmental analysis, food safety inspection, materials science, etc. Flash Spectrum which is a leading brand in the field of ultra-performance microplate readers in China, and the best choice for scientific research institutions and biochemical pharmaceutical factories, can completely replace products from developed countries.

## SuPerMax 3100 Capabilities

1. Assay for absorbance, fluorescence and luminescence, and having a variety of fitting curves for analysis.
2. Assay for activity of protease, kinase and phospholipase.
3. Protein quantification, supporting the methods of UV, NanoOrange, Bradford, Lowry.
4. DNA/RNA quantification, supporting the methods of PicoGreen, RiboGreen.
5. Assay for luciferase.
6. Assay for luminescence of ALP (alkaline phosphatase) with its substrates.
7. Assay for reactive oxygen species, ATP, cAMP.
8. Assay for cellular activity and cytotoxicity.
9. Assay for absorbance of endotoxin-TAL (Tachypleus Amebocyte Lysate) and microbial suspension.
10. Assay for spectral scanning.
11. The excitation and emission components are high resolution grating monochromators that can set the optimal excitation and emission wavelengths.
12. The built-in grating monochromator has a wavelength range of 190 ~ 1000 nm, wide application.
13. The wavelength resolution of 1 nm, wavelength repeatability of up to 0.2 nm.
14. Top and bottom optics for fluorescence assay.
15. Kinetic measurements, assay for enzymology and flash luminescence.
16. Spectral scanning mode, accurate excitation and emission spectra.
17. Wide temperature range incubation, the maximum temperature 65°C.
18. Oscillation module, no need another shaker.
19. Xenon lamp for light source, High luminous intensity and stability.

20. Optional dispensers for fast assays.
21. Sample detector and reference detector ensure precise detection.
22. Microplate analysis workstation with powerful data analysis capabilities.
23. Automation with parameter setting and self-testing.
24. Using USB interface for easy instrument control and data transfer.
25. Performance is similar with the products from developed countries, cost-effective。

## **SuPerMax 3100 Performance values**

### **1. General Feature**

- Light source: Xenon flash lamp
- Temperature: (RT + 2°C) ~ 65°C
- Shaking mode: Linear, cross, orbital
- Shaking speed: High, middle, slow
- Plate: 96, 384 well (other plate can be customized)

### **2. Absorbance**

- Detector: Photocell
- Spectral range: 190 nm ~ 1000 nm
- Wavelength accuracy:  $\pm 1.0$  nm
- Wavelength reproducibility:  $< 0.2$  nm
- OD linear range: 0 ~ 4 Abs (96well, 450 nm),  $\pm 2\%$
- Inter-hole reproducibility:  $< 0.006$
- Cuvettes: None

### **3. Fluorescence**

- Detector: PMT
- Excitation spectral range: 190 nm~1000 nm
- Emission spectral range: 270 nm~850 nm
- Wavelength resolution: 1 nm
- Bandwidth: 10 nm or 20 nm
- Wavelength accuracy:  $< 0.2$  nm
- Fluorescence intensity:
  - Top:  $< 0.5$  fmol (FITC/well; 384 well)
  - Bottom:  $< 5$  fmol (FITC/well; 384 well)
- Magnitude detection:
  - Top:  $> 6$  decades
  - Bottom:  $> 5.5$  decades
- Read mode: Top or Bottom
- Cuvettes: None

### **4. Luminescence**

- Detector: Photon counting PMT
- Spectral range: 300 nm ~ 650 nm, scanning mode: 270 nm ~ 850 nm
- Limit of detection: 7 amol ATP/well
- Dynamic range > 7 decades
- Inter-hole interference: < 0.2% (white plate)
- Dispensers: Optional

#### 5. Dispensers (Optional)

- Number: 1 or 2
- Volume: 10-1000uL

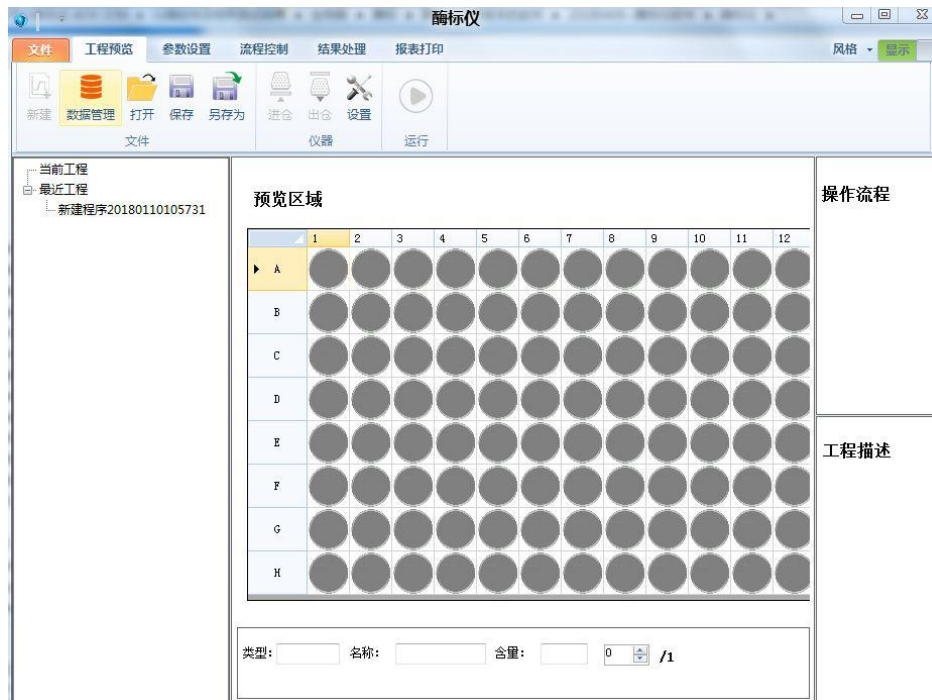
#### SuPerMax 3100 Main Construct:

1. Main engine (include: light source, detector, incubator, shaker)
2. Workstation software of SuPerMax 3100 Multi-Mode Microplate Reader

#### Instrument Accessories (Optional)

1. MF-10 incubating oscillator
2. Dispensers
3. Audit trail

#### Workstation Software Interface of SuPerMax 3100 Multi-Mode Microplate Reader



Due to advances in technology, the company reserves the right to change the design without prior notice. Please understand.