

MBI

Lab Equipment

Montreal Biotech Inc.

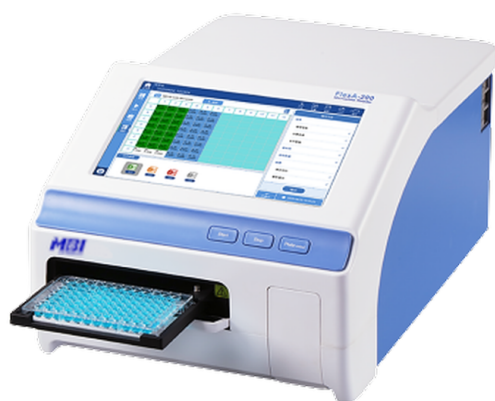
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MBI Evolution UV-Vis Microplate Reader with Port for Standard Cuvette

200–1000nm Monochromator-Based System for DNA, RNA & Protein Analysis



The **MBI Evolution UV-Vis Microplate Reader** is a high-performance monochromator-based system offering free wavelength selection from **200 nm to 1000 nm**, making it an ideal tool for virtually any photometric research application including DNA, RNA, and protein analysis. The integrated **port for standard cuvettes** expands versatility beyond microplate formats, enabling direct spectrophotometric measurements of liquid samples in cuvette mode with full incubation control.

Key Features

- **Intuitive 10-Inch Touch Screen Operation**

Stand-alone operation via 10-inch Android touch screen for quick measurements. Powerful MBI ReaderIt-II PC software available for advanced assay setup, data analysis, review, and validation. Easy data access via USB interface and WiFi connectivity.

- **Freely Selectable Wavelengths (200–1000nm)**

Advanced monochromator system allows any wavelength between 200–1000nm to be selected in 1nm steps. Spectral scanning feature enables full spectrum analysis in 1nm increments to identify optimal measurement wavelengths for new assays.

- **Flexible Plate & Cuvette Compatibility**

Compatible with both 96-well and 384-well microplates, with or without lids. The integrated standard cuvette port with independent incubation function (RT+4°C to 45°C) supports endpoint, kinetic, and spectral scanning assays in cuvette mode.

- **Advanced Photometric Performance**

Supports endpoint, kinetic, and spectral scanning assays. Broad wavelength range covering UV area, pathlength correction, and fast spectral scanning make it ideal for any photometric research application. Xenon flash lamp ensures long life and stable output.

- **Temperature Control & Linear Shaking**

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Integrated incubator with temperature range from RT+4°C to 45°C. Linear shaking with three selectable speeds (Low 5Hz, Intermediate 11Hz, High 20Hz) for optimal mixing. Temperature uniformity <1.0°C (96-well plate without cover).

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Cuvette Mode & Advanced Applications

The **MBI Evolution UV-Vis Microplate Reader with Port for Standard Cuvette** includes an independent cuvette slot with full detection capability across the 200–1000nm range. The cuvette compartment features its own incubation function (RT+4°C to 45°C), enabling temperature-controlled kinetic and endpoint measurements directly in standard cuvettes. Independent cuvette software supports endpoint method, kinetics, spectral scanning, and standard curve generation—making this system a true dual-mode spectrophotometer for both high-throughput microplate assays and traditional cuvette-based analysis.

u-Nano Ultra-Micro Plate (Optional)

The optional **u-Nano Ultra-Micro Plate** accessory enables rapid, high-throughput quantification of micro nucleic acids and proteins without sample dilution. Detect 1–16 samples simultaneously with only 2–4µL sample volume. The independent lower computer software quickly reads sample concentration and purity reports. During continuous testing, simply wipe off the last batch of samples with a dust-free cloth—no cross-contamination between measurements.

Intuitive Software for Stand-Alone & PC Control

The built-in Android software is designed for independent instrument operation with a 10-inch high-resolution touch screen and graphical user interface. Program editing and template presets are intuitive and fast. USB data export is convenient and straightforward. The **ReaderIt-II PC software** provides a graphical operation interface with simulation demonstration function, convenient data export, and detailed result report generation through built-in tools. Both the built-in software and ReaderIt-II support Chinese/English bilingual interfaces.

Applications

- DNA and RNA quantification (A260, A260/A280 ratio)
- Protein concentration determination (Bradford, BCA, Lowry)
- ELISA and immunoassay development
- Enzyme kinetics and activity assays
- Cell viability and cytotoxicity assays (MTT, XTT, resazurin)
- Spectral scanning for assay optimization
- Cuvette-based endpoint and kinetic photometric measurements
- Ultra-micro volume nucleic acid and protein quantification (with u-Nano)



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Technical Specifications

Model	MBI Evolution UV-Vis Microplate Reader with Port for Standard Cuvette (200–1000nm)
Display	10-inch color touch screen (Android system)
Light Source	Xenon flash lamp (long life)
Wavelength Range	200 – 1000 nm (1 nm steps)
Wavelength Accuracy	±2 nm
Wavelength Selection	Grating monochromator
Bandwidth	<2.5 nm
Read-Out Range	0 – 4.0 OD
Detector	Dual silicon photoelectric detectors (measurement + reference); double beam optional system
Linearity @450nm	0 – 2.5 Abs, ±2% (96-well plates)
Accuracy @450nm	±(1.0% + 0.005 Abs) [0–2.0 Abs]; ±2.0% [2.0–2.5 Abs]
Precision @450nm	CV <0.5% (Accurate mode); CV <1.0% (Fast mode)
Test Speed (96-well)	10 sec (Fast mode); 30 sec (Accurate mode); 15 sec (single wavelength); 30 sec (double wavelength)
Incubator	RT + 4°C to 45°C
Temperature Uniformity	<1.0°C (96-well plate without cover); well-to-well difference ±0.5°C at 37°C
Plate Shaking	Linear; 3 speed options (Low 5 Hz, Intermediate 11 Hz, High 20 Hz)
Microplate Formats	96-well and 384-well plates, with or without lids
Cuvette Mode	Independent cuvette slot; 200–1000nm; incubation RT+4°C to 45°C; endpoint, kinetic, spectral scanning, standard curve
User Interface	10-inch touch screen; external keyboard/mouse compatible
Analysis Software	MBI ReaderIt-II (PC) / Integrated Android software (Chinese/English)
Storage	16 GB (>10,000 test records)
Ports	3 USB ports (PC, printer, USB-disk), WiFi
Automation	Not compatible with automated systems
Power Supply	DC 24V, 6.5A
Dimensions (W×D×H)	300 × 500 × 290 mm
Weight	15 kg

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Ordering Information

For pricing, availability, or to schedule a demonstration, please contact Montreal Biotech Inc. Our team is ready to assist you with product selection, application support, and after-sales service.