

Synergy™ LX Multi-Mode Reader

Synergy™ LX Multi-Mode Microplate Reader economically automates many common microplate assays. The high quality optical design ensures excellent data in absorbance, fluorescence and luminescence detection modes. Absorbance optics include a xenon flash lamp and monochromator for continuous wavelength selection from the low UV through the visible range to 999 nm. Fluorescence and luminescence measurements are made with filter-based optics for optimal sensitivity and direct detection to prevent light loss resulting in outstanding accuracy.

The broad wavelength ranges enable many common assays including nucleic acid and protein quantification, ELISA, BCA, Bradford and cell viability. Easily accessible assay specific filter cubes make running different assays quick and effortless, while the touchscreen user interface simplifies programming. Immediate data display, plus output to a USB flash drive, printer or Gen5™ Software makes the Synergy LX a versatile assay workstation. An upgradable design allows a lab to buy what is needed today and add other detection modes in the future.



Features:

- Affordable multi-mode plate reader
- Enables many common end point assays including nucleic acid and protein quantification, ELISA, BCA and Bradford assay, and cell viability assays.
- Micro-volume nucleic acid and protein quantification capability with Take3 plates
- Continuous wavelength selection for UV-Vis measurements; 200 nm to 999 nm in 1 nm increments
- High performance, high-blocking filters for fluorescence and luminescence
- Color touchscreen for quick programming and operation and immediate data display
- Output to USB flash drive, printer or powerful Gen5 Software



Take3 Micro-Volume Plate
compatible

Typical Applications:

- ELISA
- Fluorescence ELISA
- Nucleic Acid Quantification (A_{260} and fluorescence-based)
- Nucleic Acid Purity Assessment (A_{260}/A_{280})
- Gene expression (luminescence and fluorescence)
- Cell Viability Assays (absorbance MTT, luminescence ATP, various fluorescence-based)
- Protein Quantification

Configurations:

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|---------|--|
| SLXA | Synergy LX with monochromator-based absorbance from 200 nm to 999 nm. |
| SLXF | Synergy LX with filter-based top fluorescence and luminescence. |
| SLXFA | Synergy LX with monochromator-based absorbance from 200 nm to 999 nm, filter-based top fluorescence and luminescence. |
| SLXATS | Synergy LX with monochromator-absorbance from 200 nm to 999 nm and touchscreen interface. |
| SLXFTS | Synergy LX with filter-based top fluorescence and luminescence, and touchscreen interface. |
| SLXFATS | Synergy LX with monochromator-based absorbance from 200 nm to 999 nm, filter-based top fluorescence and luminescence, and touchscreen interface. |

Note: All Synergy LX configurations include linear, orbital and double-orbital shaking.

Optional Accessories:

- Take3 Micro-Volume Plates
- Gen5™ Secure (for 21 CFR Part 11 compliance)
- Fluorescence Test Plate
- Absorbance Test Plate
- Luminescence Test Plate
- Product Qualification Package
- Printer



BioTek Instruments, Inc.
Highland Park, P.O. Box 998
Winooski, Vermont 05404-0998, USA

Phone: 802-655-4040 • Toll-Free: 888-451-5171
Outside the USA: 802-655-4740
www.biotek.com

Technical Details:

General

| | |
|-------------------|--|
| Detection mode: | UV-Vis absorbance, fluorescence intensity, luminescence |
| Read method: | End point (onboard software) End point, kinetic, area scanning, absorbance spectral scanning (under Gen5 control) |
| Microplate types: | UV-Vis absorbance: 6- to 384-well (onboard software) Fluorescence intensity and luminescence: 96- and 384-well (onboard software) All modes: 6- to 384-well (under Gen5 control) |
| Other labware: | Take3 Micro-Volume Plates (onboard software) Take3 and Take3 Trio Micro-Volumes Plates (under Gen5 control) |
| Shaking: | Linear, orbital, double-orbital |
| Software: | End point protocols (onboard software) Full data analysis and reporting (under Gen5 control) |

Absorbance

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|--------------------------|---|
| Light source: | Xenon flash lamp |
| Detector: | Photodiode |
| Wavelength selection: | Monochromator |
| Wavelength range: | 200 – 999 nm, in 1 nm increments |
| Monochromator: | |
| Bandwidth: | ≤5 nm |
| Wavelength accuracy: | ±2 nm |
| Wavelength precision: | ±0.2 nm (standard deviation) |
| Dynamic range: | 0 to 4.0 OD |
| Resolution: | 0.001 OD (onboard software) 0.0001 OD (under Gen5 control) |
| Pathlength correction: | Yes (under Gen5 control) |
| Optical density: | |
| Accuracy: | <1% at 2.0 OD <3% at 2.5 OD |
| Linearity: | <1% from 0 to 2.5 OD |
| Repeatability: | <0.5% at 2.0 OD |
| Stray light: | 0.03% at 230 nm |
| Reading speed (kinetic): | 96 wells: 12 seconds 384 wells: 23 seconds |

Fluorescence Intensity

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|--------------------------|--|
| Light source: | Halogen |
| Detector: | PMT |
| Wavelength selection: | Bandpass filters |
| Wavelength range: | 320 – 700 nm (low noise PMT) 320 – 850 nm (red-shifted PMT) |
| Dynamic range: | >6 decades |
| Sensitivity: | Fluorescein 2 pM |
| Reading speed (kinetic): | 96 wells: 24 seconds 384 wells: 76 seconds |

Luminescence

| | |
|----------------|-------------|
| Dynamic range: | >6 decades |
| Sensitivity: | 10 amol ATP |

Physical Characteristics

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|---------------|---|
| Connectivity: | One USB 2.0 ports for computer control Two USB 2.0 ports for printer connection and USB flash drive (touchscreen configurations only) |
| Dimensions: | 15" H x 15" W x 15" D (with touchscreen) (38.1 cm H x 38.1 cm W x 38.1 cm D) 12" H x 15" W x 15" D (30.5 cm H x 38.1 cm W x 38.1 cm D) |
| Weight: | ≤27 lbs (12.3 Kg) |
| Power: | External 24VDC power supply compatible with 100-240 volts AC. 50-60Hz. 60W maximum consumption. |

Regulatory

CE and TUV marked. RoHS compliant. IVD configurations are available.

Technical details are subject to change.