



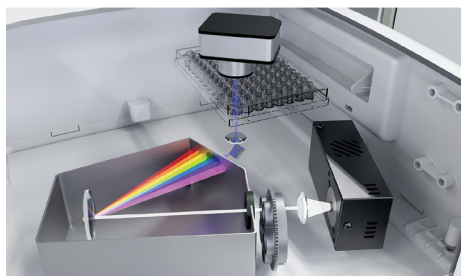
Agilent BioTek Synergy LX Multimode Reader

Affordable, high-performing multimode detection



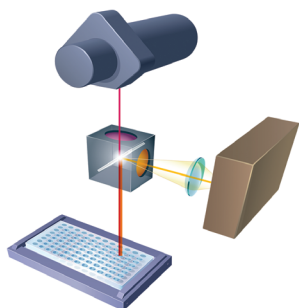
The Synergy LX multimode reader

The Agilent BioTek Synergy LX multimode reader economically automates many common microplate assays. The high-quality optical design ensures excellent performance in absorbance, fluorescence, and luminescence detection modes. When more advanced assay programming or data analysis is required, the Agilent BioTek Gen6 data analysis software makes the Synergy LX a versatile assay workstation. The Synergy LX brings affordable multimode detection to your laboratory.



Filter-free absorbance wavelength selection

The Synergy LX has a monochromator-based absorbance optical system that provides continuous, filter-free wavelength selection from 200 to 999 nm. The low UV capability enables DNA, RNA, and protein quantification in microplates, or in microvolumes with the Agilent BioTek Take3 microvolume plate.



High-quality, high-blocking filters

High-blocking filters for fluorescence and luminescence deliver uncompromised performance. High-quality filters with dichroic mirrors efficiently block background noise and provide excellent sensitivity in fluorescent measurements. The Synergy LX filter cubes can be easily changed and selected by the user via the onboard software or Gen6 data analysis software.



Easy, convenient operation

The Synergy LX touch screen provides easy assay setup and operation. The data is displayed immediately after the run and can be transferred to a USB drive for import to the Gen6 software for further analysis. A nontouch screen model is available for complete computer-controlled operation and data analysis with Gen6 software.



Microvolume analysis

The Agilent BioTek Take3 microvolume plates, used with the Synergy LX, enable multisample, direct nucleic acid and protein quantification with sample volumes as low as 2 μ L. Measure up to 16 or 48 microvolume samples for high-throughput direct quantification.



Powerful Gen6 data analysis software

Gen6 data analysis software provides microplate reader control and extensive data analysis. The efficient user interface is ideal for both new and experienced users; just select one of the prebuilt experiment templates or easily create a new custom protocol using the step-by-step process. Gen6 enables quantitative and qualitative data analysis, along with automated path length correction for microplate-based nucleic acid and protein quantification.

Applications

- Nucleic acid quantification
- A260/A280 nucleic acid purity assessments
- ELISA
- Enzyme kinetics
- Bradford, BCA, and Lowry protein assays
- Colorimetric MTT assays
- Cytotoxicity/cell viability assays
- Gene expression assays
- Fluorometric dsDNA quantitation
- Luminescent CellTiter-Glo assays
- Cell titration experiments
- Microvolume nucleic acid quantification (with Take3 plate)
- Microvolume nucleic acid purity assessments (with Take3 plate)

Technical details

General	
Detection Modes	UV-Vis absorbance, fluorescence intensity, luminescence
Read Methods	End point (onboard software) End point, kinetic, area scanning, absorbance spectral scanning (under Gen6 control)
Microplate Types	UV-Vis absorbance: 6- to 384-well plates (onboard software) Fluorescence intensity and luminescence: 96- and 384-well plates (onboard software) All modes: 6- to 384-well plates (under Gen6 control)
Other Labware Supported	Agilent BioTek Take3 microvolume plates (onboard software) Agilent BioTek Take3 and Take3 Trio microvolume plates (under Gen6 or Take3 app control)
Shaking	Linear, orbital, double orbital
Software	Agilent BioTek Gen6 data analysis software Agilent BioTek Gen5 Secure software enables 21 CFR Part 11 compliance (option)
Absorbance	
Light Source	Xenon flash
Detector	Photodiode
Wavelength Selection	Monochromator
Wavelength Range	200–999 nm, in 1 nm increments
Monochromator Bandwidth	≤ 5 nm
Dynamic Range	0–4.000 optical density (OD)
Resolution	0.001 OD (onboard software) 0.0001 OD (under Gen6 control)
Path Length Correction	Yes
Monochromator Wavelength Accuracy	± 2 nm
Monochromator Wavelength Repeatability	± 0.2 nm (standard deviation)

OD Accuracy	< 1% at 2.0 OD < 3% at 2.5 OD
OD Linearity	< 1% from 0–2.5 OD
OD Repeatability	< 0.5% at 2.0 OD
Stray Light	0.03% at 230 nm
Reading Speed (Kinetic)	96 wells: 12 s 384 wells: 23 s
Fluorescence Intensity	
Light Source	Halogen
Detector	PMT
Wavelength Selection	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 s 384 wells: 76 s
Luminescence	
Dynamic Range	> 6 decades
Sensitivity	10 amol ATP
Physical Characteristics	
Connectivity	One USB 2.0 port for computer control Two USB 2.0 ports for printer connection and USB flash drive (touch screen configurations only)
Power Consumption	External 24 VDC power supply, compatible with 100–240 VAC at 50–60 Hz 60 W maximum consumption
Dimensions	15 x 15 x 15 in (H x W x D, with touch screen) (38.1 x 38.1 x 38.1 cm) 12 x 15 x 15 in (H x W x D) (30.5 x 38.1 x 38.1 cm)
Weight	≤ 27 lb (12.3 kg)

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