

# Synergy™ HTX Multi-Mode Microplate Reader



Synergy™ HTX Multi-Mode Microplate Reader is a compact, affordable system that automates absorbance, fluorescence, luminescence and AlphaScreen®/ AlphaLISA® measurements with superior performance in all detection modes using a unique dual-optics design. The absorbance detection optics design uses a xenon flash lamp and monochromator for filter-free wavelength selection from 200 to 999 nm in 1 nm increments. Fluorescence determinations are made using a tungsten halogen lamp with interference filters in conjunction with a PMT detector for maximum sensitivity.

Synergy HTX also features BioTek's unique 4-Zone™ incubation to 50 °C, dual reagent dispenser, plus linear and orbital shaking to meet a wide variety of assay requirements in with 6- to 384-well microplates. Synergy HTX is controlled by the easy-to-use, yet powerful, Gen5™ Data Analysis Software for data collection, analysis, exporting and reporting. For increased workflow automation and throughput, BioTek's BioStack can be easily connected to Synergy HTX to automatically process up to 50 microplates at a time. For convenience, versatility and affordability, Synergy HTX is the ideal multi-mode microplate reader.

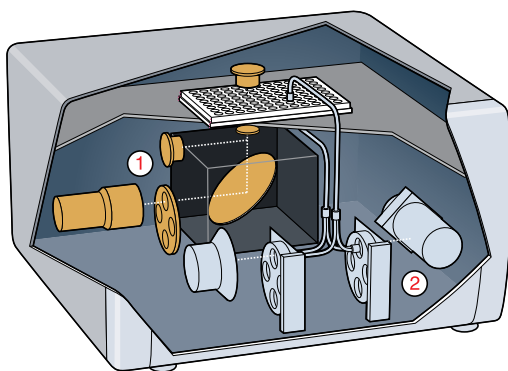


## Features:

- Flexibility of monochromator based absorbance with high performance filter-based fluorescence /luminescence
- 2 µL low volume nucleic acid quantification with Take3 and Take3 Trio plates
- Cell friendly orbital shaking and advanced incubator design to 50 °C with top/bottom gradient minimizing plate lid condensation
- Dual reagent injectors for inject/read applications, such as enzyme kinetics and Dual-Luciferase® Reporter
- AlphaScreen®/AlphaLISA®
- Modular and upgradable
- Powerful Gen5 Software for reader control and all data reduction needs
- Advanced shaking profiles including linear and orbital
- Compatible with BioStack and 3<sup>rd</sup> party automation



## Dual Optics Design:



Synergy™ HTX offers monochromator-based UV-Vis absorbance (1) and filter-based fluorescence (2).

## Models:

- S1L Synergy HTX with luminescence
- S1A Synergy HTX with UV-Vis absorbance
- S1LF Synergy HTX with luminescence and top/bottom fluorescence
- S1LFA Synergy HTX with luminescence, top/bottom fluorescence and UV-Vis absorbance
- S1LFTA Synergy HTX with luminescence, top/bottom fluorescence, time-resolved fluorescence and UV-Vis absorbance

See Web site or price list for complete model listings and descriptions.

## Optional Accessories:

- Dual Reagent Dispenser Module
- Gen5™ Secure (for 21 CFR Part 11 Compliance)
- Fluorescence Test Plate
- Absorbance Test Plate
- Luminescence Test Plate
- Patented BioCell™ 1 cm quartz vessel
- Product Qualification Package
- Take3/Take3 Trio



## Typical Applications:

- Nucleic acid quantification
- Protein quantification
- Enzyme kinetics
- Biomarker quantification
- ELISAs
- Genetic analysis
- Cell proliferation
- Cytotoxicity
- Drug absorption and metabolism
- Food safety
- Environmental monitoring



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## Specifications:

### General

Detection method:	Fluorescence, Time-Resolved Fluorescence (secondary mode), Luminescence, UV-Visible Absorbance
Read method:	End point, kinetic, spectral scanning, well-area scanning
Microplate types:	6 to 384 wells PCR plates Take3™ and Take3 Trio Micro-Volume Plates
Temperature control:	4 °C above ambient to 50 °C; ±0.2 °C at 37 °C
Shaking:	Linear, orbital
Software:	Gen5™ Data Analysis Software
Automation:	Compatible with BioStack™ and 3rd party automation

### Absorbance

Light source:	Xenon flash lamp
Wavelength selection:	Monochromator
Wavelength range:	200 – 999 nm, 1 nm increments
Bandpass:	2.4 nm
Dynamic range:	0 – 4.0 OD
Resolution:	0.0001 OD
Pathlength correction:	Yes
Monochromator wavelength accuracy:	±2 nm
Monochromator wavelength repeatability:	±0.2 nm
OD accuracy:	<1% at 2.0 OD
OD repeatability:	<0.5% at 2.0 OD
Reading speed:	96 wells: 14 seconds 384 wells: 26 seconds

### Fluorescence Intensity

Sensitivity:	Top and Bottom: Fluorescein 5 pM (1 fmol/well 96-well plate)
Light source:	Tungsten halogen Xenon flash
Wavelength selection:	Deep blocking filters
Wavelength range:	300 – 700 nm (200 – 850 nm option)
Dynamic range:	>6 decades
Bandpass:	Filter dependent
Detection system:	PMT

### Luminescence

Sensitivity:	10 amol ATP (flash) – Luminescence only model 30 amol ATP (flash) – Multi-mode models
Wavelength range:	300 – 700 nm
Dynamic range:	>6 decades
Detection system:	Low noise PMT

### AlphaScreen®/AlphaLISA®

Light source:	Tungsten halogen
Sensitivity:	300 amol of biotinylated LCK-P peptide

### Reagent Dispensers

Number:	2 syringe pumps
Dispense volume:	5 – 1000 µL in 1 µL increments
Minimum prime volume:	1.1 mL, 100 µL with back flush

### Physical Characteristics

Connectivity:	1 USB, 1 RS232 for external PC control
Power:	100 – 240 Volts AC 50/60 Hz
Dimensions:	16" W x 15" D x 10" H (40.6 x 38 x 25.4 cm)
Weight:	40 lbs (18 kg)

### Regulatory

CE and TUV marked. Models for In Vitro Diagnostic use are available.

Performance values represent the average observed factory test values.  
\*Specifications subject to change.