

## Synergy™ HTX Multi-Mode Reader

Synergy™ HTX Multi-Mode Microplate Reader is a compact, affordable system that automates absorbance, fluorescence, luminescence and Alpha 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.

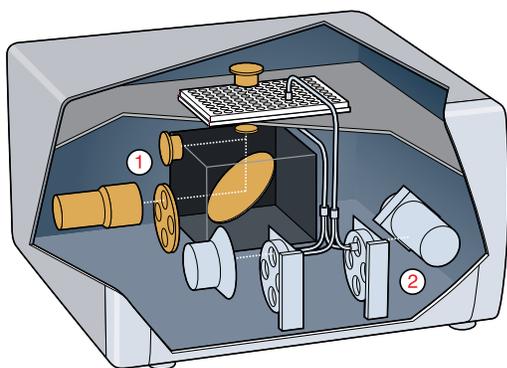
Synergy HTX also features BioTek's unique 4-Zone™ incubation to 50 °C, dual reagent dispenser, plus linear and orbital shaking to meet a wide variety of assay requirements in 6- to 384-well microplates. Synergy HTX is controlled by the easy-to-use, yet powerful, Gen5™ software for data collection, analysis, 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 Condensation Control™ to minimize plate lid condensation
- Dual reagent injectors for inject/read applications, such as enzyme kinetics and Dual-Luciferase® Reporter assays
- Alpha assay capable
- Modular and upgradable
- Powerful Gen5 Microplate Reader and Imager Software for reader control and all data reduction needs
- 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).

## 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

## Configurations:

- S1L Synergy HTX with luminescence
- S1A Synergy HTX with UV-Vis absorbance
- S1LA Synergy HTX with UV-Vis absorbance and luminescence
- 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 configuration listings and descriptions.

## Optional Accessories:

- Dual Reagent Injector 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



**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](http://www.biotek.com)

## Specifications:

### General

Detection mode:	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™ Microplate Reader and Imager 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) – Lum. and Abs./Lum. configurations 30 amol ATP (flash) – Multi-mode configurations
Wavelength range:	300 – 700 nm
Dynamic range:	>6 decades
Detection system:	Low noise PMT

### Alpha Detection

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

### Reagent Injectors

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, RoHS compliant. Configurations for In Vitro Diagnostic use are available.

Performance values represent the average observed factory test values.

"Alpha" refers to products/technologies from PerkinElmer, Inc., that carry trademarks or registered trademarks.

\*Specifications subject to change.

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