Data Sheet

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Agilent BioTek Synergy H1 Multimode Reader

Technical details

General	
Detection Modes	UV-Vis absorbance Fluorescence intensity Luminescence Fluorescence polarization Time-resolved fluorescence
Read Methods	End point, kinetic, spectral scanning, well-area scanning
Microplate Types	6- to 384-well plates
Other Labware Supported	Agilent BioTek Take3 microvolume plates
Temperature Control	4-Zone Incubation to 70 °C ("M2" configurations) or to 45 °C (all other configurations)
Shaking	Linear, orbital, double orbital
Software	Agilent BioTek Gen6 data analysis software Agilent BioTek Gen5 Secure software enables 21 CFR Part 11 compliance (option)
Automation	Agilent BioTek BioStack microplate stacker and third-party automation compatible Agilent BioTek BioSpa 8 automated incubator compatible
CO_2 and O_2 Control (Option)	Range: 0–20% (CO_2); 1–19% (O_2) Control resolution: ± 0.1% (CO_2 and O_2) Stability: ± 0.2% at 5% CO_2; ± 0.2% at 1% O_2 Models for both CO_2 and O_2, or CO_2 only, are available
Absorbance	
Light Source	Xenon flash
Detector	Photodiode
Wavelength Selection	Monochromator
Wavelength Range	230–999 nm, 1 nm increments
Monochromator Bandwidth	4 nm (230–285 nm), 8 nm (> 285 nm)
Dynamic Range	0–4.0 OD
Path Length Correction	Yes
Monochromator Wavelength Accuracy	± 2 nm
Monochromator Wavelength Repeatability	± 0.2 nm
OD Accuracy	< 1% at 3.0 OD
Reading Speed (Kinetic)	96 wells: 11 s 384 wells: 22 s

Fluorescence Intensity	
Light Source	Xenon flash
Detector	PMT for monochromator system PMT for filter system
Wavelength Selection	Quad monochromators (top/bottom) Filters (top)
Wavelength Range	Monochromators: 250–700 nm (900 nm option)
Monochromator Bandwidth	Fixed: 16 nm Variable, from 9 to 50 nm, in 1 nm increments (“M2” configurations)
Dynamic Range	7 decades
Sensitivity	Filters: Fluorescein 0.25 pM (0.025 fmol/well, 384-well plate) Quad monochromator: Fluorescein 2.5 pM (0.25 fmol/well, 384-well plate)—top Fluorescein 4 pM (0.4 fmol/well, 384-well plate)—bottom
Reading Speed (Kinetic)	96 wells: 11 s 384 wells: 22 s
Luminescence	
Sensitivity	Monochromators: 20 amol ATP Filters: 10 amol ATP
Fluorescence Polarization	
Light Source	Xenon flash
Detector	PMT
Wavelength Selection	Filters
Wavelength Range	280–700 nm (850 nm option)
Sensitivity	2 mP standard deviation at 1 nM fluorescein
Time-Resolved Fluorescence	
Light Source	Xenon flash
Detector	PMT
Wavelength Selection	Filters (top)
Sensitivity	< 40 fM
Reagent Dispensers	
Supported Detection Modes	All modes
Number	2 syringe pumps
Supported Labware	6- to 384-well microplates
Dead Volume	1.1 mL, with backflush
Dispense Volume	5–1,000 µL in 1 µL increments
Dispense Accuracy	± 1 µL or 2%
Dispense Precision	< 2% at 50–200 µL
Physical Characteristics	
Power	130 W maximum consumption
Dimensions	14.75" W x 18.25" D x 13" H (37.5 x 46.4 x 33 cm)
Weight	< 55 lb (24.95 kg)

Configurations

Part Number	SH1M	SH1MG	SH1F	SH1FG	SH1MF	SH1MFG	SH1M2F	SH1M2FG	SH1M2	SH1M2G
Temperature Control to 70 °C							•	•	•	•
Variable-Bandwidth Monochromator Fluorescence							•	•	•	•
Monochromator Fluorescence	•	•			•	•				
Monochromator Absorbance	•	•			•	•	•	•	•	•
Full-Light Luminescence	•	•	•	•	•	•	•	•	•	•
Filter/Dichroic Fluorescence			•	•	•	•	•	•		
Fluorescence Polarization			•	•	•	•	•	•		
Time-Resolved Fluorescence	•	•	•	•	•	•	•	•	•	•
Filtered Luminescence			•	•	•	•	•	•		
Temperature Control to 45 °C	•	•	•	•	•	•				
Gen6 Data Analysis Software	•	•	•	•	•	•	•	•	•	•
Gas Controller Compatible		•		•		•		•		•

All configurations are compatible with the Agilent BioTek dual-reagent injector module, sold separately.

www.agilent.com/lifesciences/biotek

DE48241197

This information is subject to change without notice.

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Printed in the USA, May 15, 2023
5994-3583EN

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