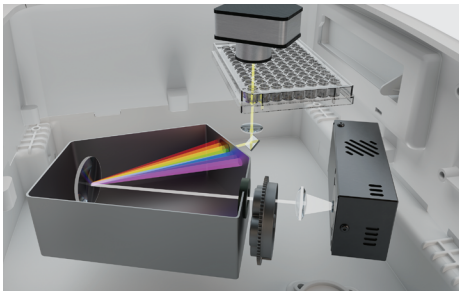
Agilent
Trusted Answers

Agilent BioTek Epoch 2 Microplate Spectrophotometer

Performance and versatility in a powerful compact system

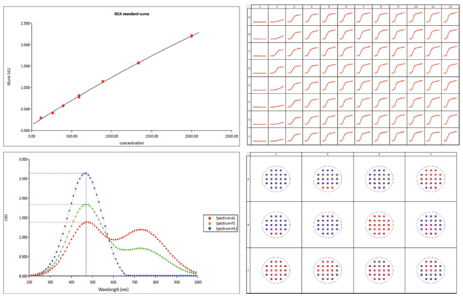
Epoch 2 microplate spectrophotometer

The **Agilent BioTek Epoch 2 microplate spectrophotometer delivers** excellent performance and versatility for UV-Vis absorbance measurements, spanning a range of applications from end-point and kinetic ELISA to nucleic acid quantification. This compact system is available with accessible touch screen onboard software or, alternatively, complete computer control and powerful data analysis, reporting, and exporting enabled by the included Agilent BioTek Gen5 data analysis software.



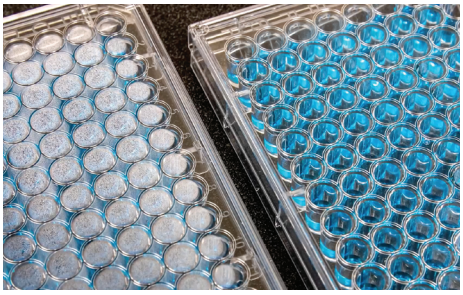
Filter-free 200 to 999 nm wavelength selection

The Epoch 2 has a monochromator-based optical system that provides filter-free UV-Vis wavelength selection for assays in the range of 200 to 999 nm. The low-UV capability enables DNA, RNA, and protein quantification in 6- to 384-well microplates, standard cuvettes, or in microvolumes with the Agilent BioTek Take3 microvolume plate.



Multiple read methods

Epoch 2 is designed for versatility, including the ability to measure absorbance in end-point, kinetic, spectral scan, and well-area scan methods. These methods facilitate workflows across a range of life science applications, including ELISA, microbial growth, and cell-based assays, and nucleic acid quantification.



Temperature-sensitive assay support

The 4-Zone Incubation to 65 °C supports temperature-sensitive assays, while the Condensation Control feature prevents condensation on plate lids. Measurements remain precise and accurate, even over long-term incubated kinetic runs. Linear, orbital and double-orbital shaking provide ideal mixing profiles for a variety of assays.

Microvolume analysis

Take3 microvolume plates, used with the Epoch 2, enable multisample, direct nucleic acid and protein quantification with sample volumes as low as 2 µL. Measure up to 16 or 48 microvolume samples for high-throughput, direct quantification.

Applications

The unique collection of features designed into the Epoch 2 microplate spectrophotometer make it ideally suited for many applications, including:

- DNA and RNA quantification
- BCA, Lowry, and Bradford protein assay
- ELISA
- Enzyme kinetics
- Microbial growth assays
- Cytotoxicity assays
- Cell proliferation assays
- Labeling efficiency

Technical details

General	
Detection Modes	UV-Vis absorbance
Read Methods	End-point, kinetic, absorbance spectral scanning (onboard software and under Agilent BioTek Gen5 control) End-point, kinetic, absorbance spectral scanning, well-area scanning (under Agilent BioTek Gen5 control)
Microplate Types	6- to 384-well plates
Other Labware Supported	Agilent BioTek Take3 microvolume plates (onboard software) Agilent BioTek Take3 and Take3 Trio microvolume plates (under Gen5 control) Standard cuvette (option)
Temperature Control	4-Zone Incubation to 65 °C with Condensation Control
Shaking	Linear, orbital, double-orbital
Software	Agilent BioTek Gen5 data analysis software Agilent BioTek Gen5 Secure software enables 21 CFR Part 11 compliance (option) Onboard software with easy programming and several predefined protocols (touch screen configurations)
Automation	Agilent BioTek BioStack microplate stacker and third-party automation compatible Agilent BioTek BioSpa 8 automated incubator compatible Agilent BenchCel microplate handler compatible
Absorbance	
Light Source	Xenon flash
Detector	Photodiode
Wavelength Selection	Monochromator
Wavelength Range	200–999 nm, in 1 nm increments
Monochromator Bandwidth	2.9 nm
Dynamic Range	0–4.0 OD
Resolution	0.001 OD (onboard software) 0.0001 OD (under Gen5 control)
Path Length Correction	Yes (under Gen5 control)
Monochromator Wavelength Accuracy	± 2 nm
Monochromator Wavelength Repeatability	± 0.2 nm
OD Accuracy	< 1% at 2.0 OD < 3% at 2.5 OD
OD Linearity	< 1% from 0—2.5 OD
OD Repeatability	< 1% from 0—2.5 OD
Stray Light	< 1% from 0—2.5 OD
Reading Speed (Kinetic)	96 wells sweep read: 8 s 384 wells sweep read: 14 s
Physical Characteristics	
Power	External 24 VDC power supply compatible with 100–240 VAC at 50–60 Hz. 60 W maximum consumption
Dimensions	Touch screen models: 12.5" H x 12.75" W x 15.5" D (32 x 32.3 x 39.54 cm) Non-touch-screen models: approximately 8.5" H x 12.75" W x 15.5" D (22 x 32.3 x 39.54 cm)
Weight	25 lb (11.34 kg)

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