

NEPHELOstar® Plus - Technical specifications

Due to the modularity of BMG LABTECH's instruments, all or combinations of the features below can be installed at purchase or upgraded at any time. Please contact your local representative for more details or a quote.

Detection mode	Nephelometry, light-scattering
Measurement modes	Endpoint and kinetic measurements
Microplate formats	Up to 384-well plates
Light source	Self-monitoring laser diode Wavelength 635 nm Selectable beam width: 1.5 to 3.5 mm Selectable intensity 0 to 100 % Scattering angle: detects up to 80° full cone angle
Sensitivity	Depends on particle size and liquid properties Silica detection: 800 nM (particle size 0.5 to 10 µm) Dynamic range: 5 decades Maximum count rate: 2,000,000 Relative Nephelometric Units (RNUs) per second
Read times	Depend on assay conditions and liquid surface stability Shortest possible times: 16 s (96-well), 47 s (384-well)
Reagent injection	Up to 2 built-in reagent injectors Injection at measurement position Individual injection volumes for each well (3 to 500 µL) Variable injection speed up to 420 µL/s
Shaking	Linear, orbital, and double-orbital with user-definable time and speed
Gas vent	System to inject an atmosphere or to pull a vacuum into the reader
Incubation	+4°C above ambient up to 45°C
Software	Multi-user software package including Reader Control and MARS data analysis software, FDA 21 CFR part 11 compliant
Dimensions	Width: 44 cm, depth: 48 cm, height: 32 cm; weight: 25 kg
Accessories	
Stacker	Mid-throughput microplate handling system Magazines for up to 50 plates Continuous loading feature Barcode reader
THERMOstar	Microplate incubator and shaker Shakes and incubates four microplates simultaneously Incubation up to 56°C in 1°C steps Heating plates above and below the microplates
Upgrades	Upgrades to include options such as reagent injectors, gas vent, etc. are available. Please contact your local representative for more information.

*Limit of detection (sensitivity) was calculated according to the IUPAC standard: $3 \times (SD_{blank}) / slope$. Specifications are subject to change without notice. © 2017 All rights reserved. All logos and trademarks are the property of BMG LABTECH.