

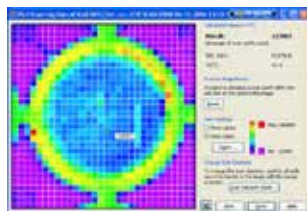
Software

Powerful microplate Reader Control and MARS data analysis software

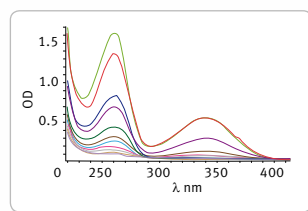
BMG LABTECH's software package includes Reader Control and MARS data analysis interfaces. This multi-user software package is included with every reader.

The intuitive Control Software is fully compliant with FDA regulation 21 CFR Part 11 and allows users to define instrument parameters and test protocols.

The MARS data analysis software allows the user to display data, signal plots, spectra, and standard curves in 2D or 3D graphs. Data is processed using powerful predefined templates or a broad range of data calculation features. The software is also capable of creating standard curves and respective values (i.e. EC_{50} , IC_{50} and r^2) based on the following curve fitting algorithms:

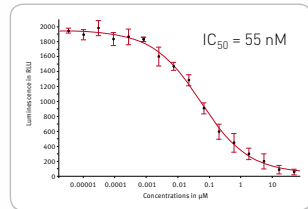


Matrix scanning



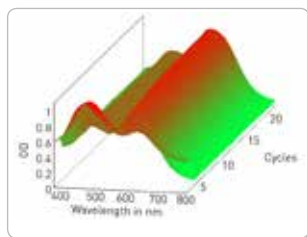
NADH spectrum

- Linear regression
- 4- and 5-parameter
- Exponential
- Point-to-point
- Segmental regression
- Michaelis-Menten K_m
- Cubic spline
- 2nd and 3rd polynomial.

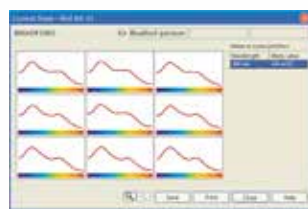


Dose-response curve

The MARS wizard creates a step-by-step calculation of a standard curve, and important parameters such as S/N, Delta F % and Z' are easily obtained. Fast analysis of enzyme kinetic data using standard fit equations completes the MARS software package.



3D enzyme kinetic chart



Current state window

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 DLR is a trademark of Promega Corporation.
 LanthaScreen is a registered trademark of Invitrogen Corp.
 Transcreener is a registered trademark of BellBrook Labs.
 AlphaScreen, AlphaLISA, AlphaPlex, LANCE, and DELFIA are registered trademarks of PerkinElmer, Inc.
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Applications

We continuously work with all the leading reagent companies to optimize instrument settings for their existing and newest assays. Our comprehensive searchable applications center reflects more than 25 years of expertise and innovations in microplate reading technology. Over 4,000 references exemplify the flexibility and versatility of our readers, as well as their use in the chemical and biological sciences.

Visit our application center at: www.bmglabtech.com/applications/

FRET assays **Transcreener®**
 Gene expression NADH / NADPH assays
 Binding studies DNA/RNA quantifications
 AlphaPlex™ technology **HTRF®**
 Dual luciferase assays **LANCE®**
DLR™ AlphaTechnology
 Kinase activity Protease activity CELL VIABILITY
 SNP Genotyping Solubility tests
HTS LanthaScreen® **ORAC**
 Enzyme activity **ELISA**
 Apoptosis Immunoprecipitation
 Protein quantifications ATP and ADP detection
 Enzyme kinetics **BRET assays**
 PCR PRODUCT QUANTIFICATIONS Reporter gene assays
DELFLIA® ROS detection



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Made in Germany



Instrumentation guide



The Microplate Reader Company

PHERAstAr® FSX

The gold standard for HTS

Fluorescence intensity
Fluorescence polarization
Time-resolved fluorescence
TR-FRET/HTRF®
UV/vis absorbance spectra
Luminescence
AlphaScreen®

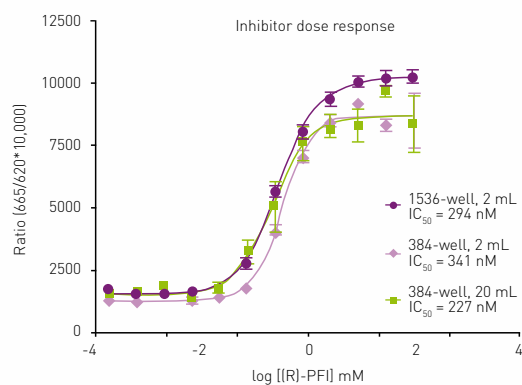


3456 wells

German engineering at its best.

The PHERAstAr® FSX is the gold standard microplate reader for high-throughput screening, specifically designed for highest sensitivity and speed. Its new and unique features make it superior to any other microplate reader currently on the market.

- Most sensitive reader in fluorescence intensity and polarization
- Fastest read times with Simultaneous Dual Emission detection (incl. AlphaTechnology)
- 9 decades luminescence dynamic range
- Full absorbance spectra from 220-1000 nm in less than 1 s/well
- Top and bottom reading with focus adjustment (0.1 mm z-height)
- All microplate formats up to 3456-well
- New generation TRF laser for highest performance
- AlphaScreen®/ AlphaLISA® laser
- Up to two onboard reagent injectors
- Three integrated barcode readers



[R]-PFI 2 hydrochloride inhibitor titration with SET7/9 enzyme

Never worry about which filter or dichroic mirror is installed!

Assay-specific Optic Modules are configured with all the necessary optical components including excitation and emission filters, dichroic mirrors, beam splitters, and polarization filters. The PHERAstAr FSX can accommodate up to six Optic Modules. All Optic Modules are easily exchangeable, barcoded, and are automatically selected by the reader for the appropriate assay.



CLARIOstar®

The LVF Monochromator™ reader

Fluorescence intensity
Fluorescence polarization
Time-resolved fluorescence
TR-FRET/HTRF®
UV/vis absorbance spectra
Luminescence
AlphaScreen®



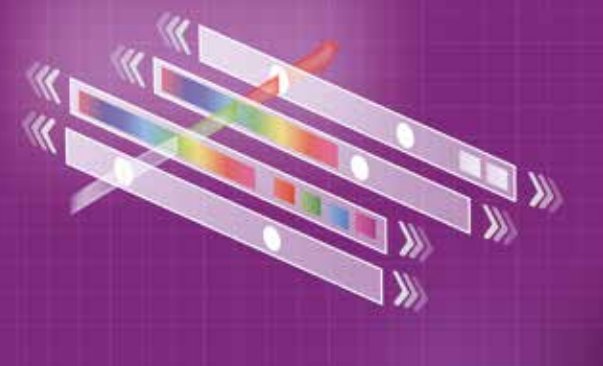
1536 wells

The most sensitive monochromator-based reader

The CLARIOstar is a multi-mode, high-performance plate reader that combines the flexibility of monochromators with the sensitivity of filters. This modular, upgradeable reader is the perfect choice for assay development.

- Patented Linear Variable Filters LVF Monochromators™
- Continuously adjustable bandwidths (8-100 nm)
- Increased sensitivity over conventional monochromators
- Fluorescence and luminescence spectral scanning
- Integrated fluorophore library for easy wavelength selection
- Full absorbance spectra from 220-1000 nm in less than 1 s/well
- All microplate formats up to 1536-well
- Top and bottom reading with focus adjustment (0.1 mm z-height)
- Up to two onboard reagent injectors
- AlphaScreen®/AlphaLISA® laser

LVF Monochromator principle



LVF Monochromator™ and filter selector technology

Highest light transmission and no stray light give the patented LVF Monochromator system filter-like performance and sensitivity. Its slides can also hold individual filters, polarizers, and dichroic mirrors for specific applications. This unique in-line optical path allows fixed filters to be combined with the LVF Monochromator in one measurement, providing users with the highest level of versatility, flexibility, and sensitivity.



Omega series

Filter-based reader platform

Fluorescence intensity
Time-resolved fluorescence
TR-FRET/HTRF®
UV/vis absorbance spectra
Luminescence
AlphaScreen®



384 wells

Upgradeable multi-mode microplate readers

The Omega series offers a combination of performance, flexibility, and value for money. It is the perfect platform for life science studies.

SPECTROstar®

- Upgradeable, full spectrum spectrometer-based absorbance reader
- Reagent injectors, plate shaking and incubation up to 45°C or 65°C

LUMIstar®

- Upgradeable luminometer for flash and glow assays
- Top/bottom reading and Simultaneous Dual Emission for BRET assays

FLUOstar®

- Fluorescence intensity, luminescence, TRF and AlphaScreen®
- Spectrometer-based absorbance with 220-1000 nm spectral scans in <1 s/well, or filter-based absorbance with range 240-740 nm

POLARstar®

- Includes all FLUOstar Omega features
- Fluorescence polarization and Simultaneous Dual Emission for FRET and BRET assays



NEPHELOstar® Plus

Unique laser-based nephelometer

Light-scattering and turbidity measurements

- Uses light-scattering for detection of insoluble particles
- All microplate formats up to 384-well
- Up to two onboard reagent injectors
- Shaking and incubation up to 45°C
- Stacker and robot compatible

384 wells



SPECTROstar® Nano

Ultra-fast UV/vis spectrometer

UV/vis absorbance spectra
Microplate-based absorbance
Cuvette-based absorbance



1536 wells

Ultra-fast DNA/RNA, protein, and ELISA measurements

Spectrometer-based dedicated absorbance reader for microplates and cuvettes with ultra-fast, full-spectrum detection.

- Full absorbance spectrum 220-1000 nm detection in <1 s/well
- All microplate formats up to 1536-well
- Integrated cuvette port, plate shaking and incubation up to 45°C

Accessories

Atmospheric Control Unit (ACU)



Optimal environment for any live cell-based assay:

- Active regulation of O₂ and CO₂
- Available for CLARIOstar, Omega series, and NEPHELOstar Plus

LVis Plate



Microplate for low-volume measurements

- Sixteen microdrop well sites for 2 µL samples
- Horizontal standard cuvette position for precision and accuracy tests
- Compatible with all spectrometer-based readers

Stacker



Mid-throughput microplate handling

- Rapid loading, unloading, restacking, for up to 50 microplates
- Continuous load feature and barcode reader
- Accommodates all microplate formats
- Compatible with CLARIOstar, PHERAstAr FSX, Omega series, and NEPHELOstar Plus