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. EC50, IC50, and r2) based on the following curve fitting algorithms:

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

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.

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 6,000 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/

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DLR® is a trademark of Promega Corporation.

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The gold standard for HTS

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 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 1536-well
- New generation TRF laser for highest performance
- AlphaScreen®/ AlphaLISA® laser
- Up to two onboard reagent injectors
- Three integrated barcode readers

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.

**LGF Monochromator™ principle**

Highest light transmission and no stray light give the patented LGF 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 LGF Monochromator in one measurement, providing users with the highest level of versatility, flexibility, and sensitivity.

**LGF Monochromator™ and filter selector technology**

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**PHERAstar® FSX**

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

**CLARIOstar®**

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

**Omega series**

- Fluorescence intensity, luminescence, TRF and AlphaScreen®
- Microplate-based absorbance

**Filter-based reader platform**

- 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® Nano**

- 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
- NIST-traceable optical filters for precision and accuracy tests

**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

- 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