



Il lettore di micropiastre **FluostarOMEGA**

per misurazioni di

- *Assorbanza*
- *Fluorescenza*
- *Luminescenza*



Referente strumentazione

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sez Biochimica e Biotecnologie (DISB)

11 settembre 2024 CONSEGNA

12 settembre 2024 INSTALLAZIONE (laboratorio QC, campus Scientifico, sez Biochimica e Biotecnologie)

23 settembre 2024 TRAINING online per i partecipanti al progetto





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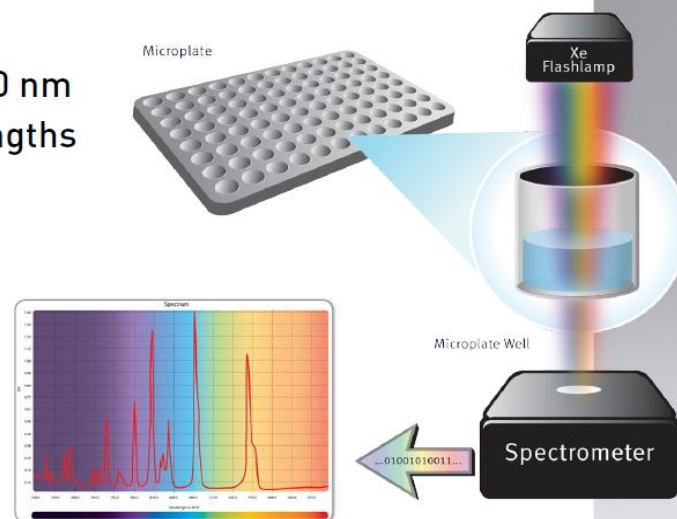
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Spectrometer

- UV/Vis absorbance
- Spectral scan 220 – 1000 nm
- Up to 8 discrete wavelengths simultaneously
- Ultra-fast: < 1 sec/well



www.bmglabtech.com

Ottica top/bottom

Controllo temperature da ambiente fino a +45°C

Omega filter wheel

Standard Filter Set

Excitation:	Emission:
Ex355 nm	Em460 nm
Ex485 nm	Em520 nm
Ex544 nm	590-10 nm
Ex 380 nm	Em 450 nm





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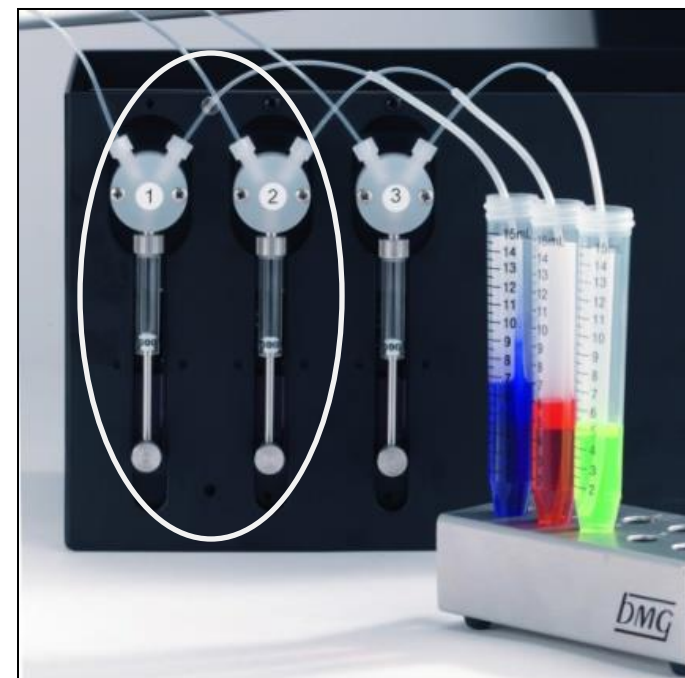
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Omega Microplate Reader Series

- Reagent injectors, e.g. for fast kinetics
 - On-board and light protected
 - **3 – 500 μL** (depending on plate) in 0.5 μL increments
 - Up to **4** individual injections per well
 - Lowest dead volume (**< 0.5 mL**, to fill whole system)
 - Decrease time, increase accuracy and precision
 - Inject a 96-well plate in < 30 s
 - **Back-flush feature for sample recovery**
(approx. 20 μL remain in system)





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Plate Shaking Modes

BMG LABTECH
The Microplate Reader Company

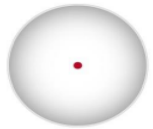
linear



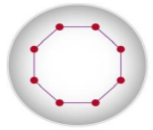
orbital



double orbital



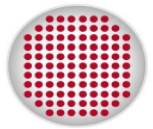
Standard reading mode: all flashes in the center of the well → average



Orbital reading mode: all flashes along a circle → average

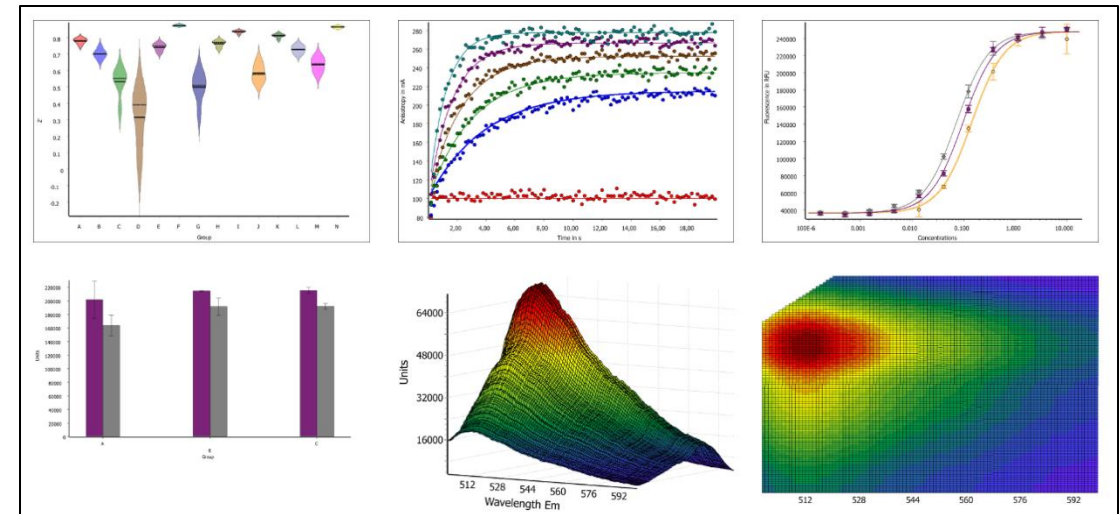
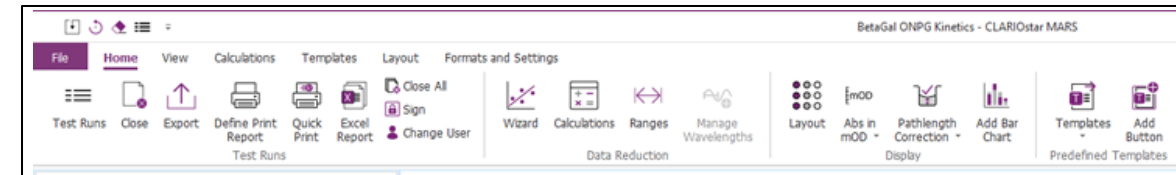


Spiral reading mode: all flashes along a spiral → average



Matrix reading mode: up to 30 x 30 measurements per well

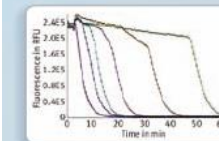
MARS Data Analysis Software



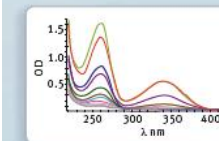


Some typical applications

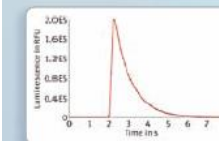
- **Fluorescence Intensity:**
 - Fluorescent DNA kits
 - Calcium flux measurement
 - ORAC (Oxygen radical absorbance capacity) assay
 - FRET assays (e.g. CFP / YFP)
- **Fluorescence Polarization:**
 - Kinase assays
 - Screening assays
- **UV/Vis Absorbance Spectrometer:**
 - DNA / protein quantification/purification
 - Enzyme activity assays
 - Microbial growth
 - ELISA assays
 - Spectral scanning of compound libraries



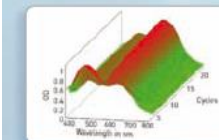
ORAC assay



NADH spectrum



Aequorin assay



3D enzyme kinetic chart

Grazie per l'attenzione