Synergy™ 2 is the most advanced multi-detection microplate reader. With performance, speed and sensitivity that challenge the more expensive instruments, Synergy 2 is truly “best-in-class”. Based on BioTek’s popular Synergy™ HT platform, Synergy 2 has been further enhanced with improved sensitivity in Fluorescence Intensity, Time Resolved Fluorescence, Luminescence and UV-Vis Absorbance and the addition of Fluorescence Polarization.

Synergy 2 optimizes performance in all detection modes by utilizing dedicated optical elements for each individual technique. This unique approach offers uncompromised performance and the lowest limits of detection. Modular architecture provides for scalable instrument options that result in acquisition cost savings and allow for future upgrades. This combination of innovative design, superior performance, flexibility and cost-effectiveness make Synergy 2 the most advanced, best value in multi-detection microplate readers.

**Features**

- Measurement Techniques: Fluorescence Intensity, Time Resolved Fluorescence, Fluorescence Polarization, Glow and Flash Luminescence, UV-Vis Absorbance, FRET, TR-FRET, BRET, area scanning, spectral scanning
- Unique Optical System: a narrow band monochromator, optimized filter/dichroic mirror pairing, and three broad spectrum light sources achieve superior performance in all read modes
- High Sensitivity: dedicated optical elements optimized for each specific modality result in the lowest limits of detection available in one compact instrument
- Modular Design: purchase only what you need and easily upgrade later as experimental requirements expand
- High Throughput: optimized for screening assays including 1536-well read mode
- Wide Range of Applications: with built-in temperature control, shaking, and optional dual reagent injector, virtually any microplate-based application is possible
- New Gen5™ Software: Synergy 2 is driven by the most powerful and efficient microplate control, data collection and analysis software available today

**High Throughput**

The Synergy 2 offers a small footprint, a robotic-friendly career for easy integration, and reads a 384-well plate in only 26 seconds.

**Wide Range of Applications**

Dual reagent injector for ion channel assays, flash luminescence and fast enzyme kinetics.

www.biotek.com
Detection

Gen5™ Reader Control and Data Analysis Software

The Synergy™ 2 features a brand new software platform with a modern and intuitive user-interface.

Applications
• Screening assays (e.g. fluorescence polarization, TR-FRET, luminescence)
• Binding assays
• Ion channel assays
• Quantitative assays (DNA, protein)
• Kinetic assays
• Gene expression assays (GFP, Luciferase)
• ELISA assays
• Cell proliferation, Cytotoxicity

Optional Accessories
Absorbance Test Plate
Patented Bio-Cell™ 1 cm quartz vessel
Product Qualification Package
Gen5™ Secure 21 CFR Part 11 Compliant

Models
Synergy 2: Detection systems and injectors available as individual modules

See price list or Web site for complete model listings and descriptions.

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Fluorescence Intensity:
• Light Source: Tungsten Halogen
• Wavelength Range: High Energy Xenon Flash
• Wavelength Selection: 200 – 700 nm (900 nm option)
• Sensitivity Top (Fluorescein): Deep blocking filters/mirrors 1 pM typical

Luminescence:
• Wavelength Range: 300 – 700 nm
• Dynamic Range: > 6 decades
• Sensitivity (ATP): 30 amol typical (flash)

Absorbance:
• Light Source: Xenon Flash
• Wavelength Selection: Monochromator
• Wavelength Range: 200 – 999 nm, 1 nm increment
• Bandwidth: 2.4 nm
• Wavelength Accuracy: ± 2 nm
• Wavelength Precision: ± 0.2 nm
• Measurement Range: 0 to 4.0 OD
• OD Accuracy: < 1% at 2 OD typical
• OD Precision: < 0.5% at 2 OD typical
• Stray Light: 0.03% at 230 nm typical

Fluorescence Polarization:
• Light Source: Tungsten Halogen
• Wavelength Range: High Energy Xenon Flash
• Wavelength Selection: 200 – 700 nm (900 nm option)
• Sensitivity Top (Fluorescein): Deep blocking filters/mirrors 3 mP at 1 nM typical

Time Resolved Fluorescence:
• Light Source: High Energy Xenon Flash
• Wavelength Range: 200 – 700 nm (900 nm option)
• Wavelength Selection: Deep blocking filters/mirrors 60 fM typical

Dispensers:
• Number of Injectors: 2
• Dispense Volume: 5 – 1000 µl in 1 µl increment
• Dead Volume: 1 ml, 100 µl with backflush

Speed (Minimum Kinetic Interval):
• 96-well: 14 seconds
• 384-well: 26 seconds
• 1536-well: 47 seconds

*Specifications subject to change