Ultra Fine-Tuned™ technology is what sets the Synergy Mx Multi-Mode Reader apart. Its quadruple monochromator system selects wavelengths with a repeatability of plus or minus 0.2 nm. Its top optical head can focus up and down on the samples with a 100 μm resolution. Four slits on the excitation and emission side provide a choice of 16 bandpass combinations for every wavelength pair. Its advanced 4-Zone™ temperature control system incubates up to 65°C with a precision of ± 0.5°C at 37°C. These unique features and BioTek’s exclusive focus on microplate instrumentation and software make the Synergy Mx the most precise, sensitive and flexible multi-mode microplate reader available today for life-science research applications.

Features:
- Fully monochromator-based with quadruple grating architecture for Ultra Fine-Tuned performance
- High performance fluorescence (top and bottom), absorbance and dedicated luminescence detection systems accommodate all life-science research microplate applications
- Variable bandpass selection adds flexibility in fluorescence mode
- Automated Z-height adjustment accommodates variable microplate heights and liquid levels with 100 μm resolution
- Cuvette port to measure standard 1-cm path cuvettes if only a few samples need to be run, or to compare data with a standard cuvette spectrophotometer
- Modular architecture allows purchase of required modes with the ability to upgrade later
- Optional dual-reagent dispenser can be used for assays requiring precise timing such as ion channel assays or luminescent flash ATP assays.
Typical Applications:

**Nucleic acid and protein quantification**
DNA quantification at 260 nm, colorimetric protein assays (Lowry, Bradford), sensitive fluorescence detection for gene expression assays (GFP)

**Enzymology**
Gene expression assays (β-Galactosidase, luciferase activity), apoptosis research (Caspase activity) or enzyme characterization

**Biomarker quantification**
High-throughput quantification of common biomarkers such as Insulin, Cholesterol or TNF-α

**Microbial quantification**
High-throughput growth curve monitoring

**ELISA assays**

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

Optional Accessories:
• Gen5™ Secure (for 21 CFR Part 11 Compliance)
• Product Qualification Package

Specifications:

| Dimensions: | Length: 20.9” (53.1 cm) |
|            | Width: 17” (43.5 cm)    |
|            | Height: 15” (38.1 cm)   |
| Weight:    | 70 lbs (31.5 kg)        |
| Microplate types: | 1- to 384-well plates |
| Temperature control: | 4°C above ambient to 65°C ± 0.5°C at 37°C |
| Shaking:   | Yes                    |
| Top optics adjustment: | Yes, 100 μm resolution |
| BioStack Compatible (Automation-Ready): | Yes |
| Cuvette port: | Yes, UV-visible absorbance |
| Software:  | Gen5™ Data Analysis Software |

**Fluorescence Intensity**

- **Light source:** High Energy Xenon Flash Lamp
- **Detection system:** Red shifted PMT
- **Wavelength range:** 250 - 900 nm, 1 nm increment
- **Wavelength selection:** Double grating monochromators Top/Bottom
- **Bandwidth:** Variable 9 nm, 13.5 nm, 17 nm, 20 nm
- **Sensitivity:** Top: Fluorescein 2 pM typical (0.2 fmol/well 384-well plate)
  Bottom: Fluorescein 2.5 pM typical (0.25 fmol/well 384-well plate)

**Luminescence**

- **Detection system:** Low noise PMT with digital photon integration
- **Dynamic range:** > 6 decades
- **Sensitivity:** 10 amol ATP typical (flash)

**Absorbance**

- **Light source:** High Energy Xenon Flash Lamp
- **Wavelength selection:** Double grating monochromator
- **Wavelength range:** 230 - 999 nm, 1 nm increment
- **Bandwidth:** 2 nm (230-285 nm), 4 nm (>285 nm)
- **Measurement range:** 0 - 4.0 OD
- **Resolution:** 0.0001 OD
- **Pathlength correction:** Yes
- **OD accuracy:** < 1% at 2.0 OD typical
- **OD repeatability:** < 0.5% at 2.0 OD typical

**Dispensers**

- **Number:** 2 syringe pumps
- **Dispense volume:** 5 - 1000 μL in 1 μL increment
- **Dead volume:** 1.1 mL, 100 μL with back flush
- **Plate geometry:** Syringe 1: 6- to 384-well microplates Syringe 2: 6- to 96-well microplates
- **Dispense Precision:** < 2% at 50-200 μL
- **Dispense Accuracy:** ± 1 μL or 2%

**Speed (minimum kinetic interval)**

|            |         |
|            |         |
| 96 well:   | 11 seconds |
| 384 well:  | 22 seconds |
Microplate Reader (spectrophotometer)

Synergy
Multi-Mode Microplate Reader
Model: Synergy MX
Specifications:
- can be used for different microplate types: 6, 12, 24, 48, 96 and 384-well plates
- temperature control: 4°C above ambient to 65°C ± 0.5°C
- shaking is possible
- the fluorescence wavelength ranges from 250 - 900 nm, 1 nm increment, with possible wavelength selection from top and bottom
- the absorbance wavelength ranges from 230 - 999 nm, 1 nm increment
- dedicated luminescence detection possible
- the minimum kinetic interval speed is 11 seconds for 96 well plates and 22 seconds for 384 well plates
- uses Gen5™ Microplate Data Collection & Analysis Software

Typical application:
Nucleic acid and protein quantification
Quantification of biochemical assays based on color changes
Spectrum analysis
Microbial quantification
ELISA assays

Location: Building 39, 3rd floor, Room 310
- bruk tempertauot: n-4 mejalt jeq tempertauot hazder de 65 mejalt neqalos

- kemt aqinay l'kolei

- tonaq avor gu bashimsh fl'klaorotzneti en by 250 – 900 nemter su aqipiyt k'ria melmla l'amhla
- tonaq avor gu bashimsh bi'ya en by 230 – 999 nemter
- kemt avadhatah shi k'ria at limlesen
- kemt apparoat ha k'ria melmla
- m'ntemxem maroa kemt byro en shi qoletaat shi 96 bari kha-22 shi qoletaat shi 384 bari rage
- mafaal u", hhekem Gen5 hull qeqoq qoqegu neqalos

: amphi himeqem:

- kemot halbo'qo qoqegu
- kemot halbo'qo qoqegu on mesosim su shomi'eqe ben
- yekkom qeqoko
- kemot d'kolo'qayim
- kemot qeqoko qeqoko qeqoko
- ELISA
- mbekem

: m'k wnby 39, koma 3, thad 310

: kemot ramaqayim qeqoko:
- kemot ramaqayim: 1-10 kemot khokh
- by 90-160 sheqoq bahokh
- kemt bhikhoq aravokh lemar lo'la