

Annexure for Microplate Spectrophotometer

Important note

- 1. These are guideline specifications- the minor variations from the specifications are acceptable, only if it fulfils the safe operation of the instrument to fulfil the requirement.**
 - 2. All the specifications should be quoted in the similar order as given below. The copy and paste of similar specifications is not acceptable.**
 - 3. The fabrication to match the specifications is not acceptable; the company should have the running model – this ensures the reliability of the instrument.**
- Performs Nucleic acid and protein direct quantification, Biofuel research applications, Cytotoxicity and Cell proliferation assay, End point and kinetic ELISA.
 - Read modes: End point, kinetic, spectral scanning, well area Scanning
 - Microplate types: 6-, 12-, 24-, 48-, 96-, and 384-well plates
 - Must be compatible with 2 μ L low volume microplate accessory with 16- sample microspots for direct nucleic acid quantification and other applications.
 - Wavelength range: 200 – 999 nm,
 - Bandpass: 2.9 nm
 - Wavelength accuracy ± 2 nm
 - Wavelength precision ± 2 nm (standard deviation)
 - Accuracy $< 1\%$ at 2.0 OD
 - $< 3\%$ at 2.5 OD
 - Linearity $< 1\%$ from 0 to 2.5 OD
 - Repeatability $< 0.5\%$ at 2.0 OD
 - Stray light: 0.03% at 230 nm
 - Light source: Xenon flash lamp
 - Detector: Photodiode
 - Wavelength selection: Monochromator
 - Dynamic range: 0.0. – 4.0 OD, Resolution: 0.0001 OD
 - Shaking: Orbital, double orbital and linear
 - Must have temperature control from ambient + 4 $^{\circ}$ C to 65 $^{\circ}$ C with a 4-zone temperature control system, with uniformity across the microplate of ± 0.5 $^{\circ}$ C at 37 $^{\circ}$ C to limit edge effects in incubated assays.
 - Must have temperature gradient option to prevent condensation in lidded plates
 - Read speed: 96 wells sweep read: 8 seconds
384 wells sweep read: 14 seconds
 - Power: 230 VAC, 50/60 Hz.
 - Data analysis software with Multiple user license for computer control
 - Computer/LAPTOP with i5 processor or higher, 8 GB RAM, 500 GB HDD, USB Ports, Colour Monitor, Keyboard, Mouse, Windows 10 Pro (64-bit) operating system, MS Excel 2016 or later (64-bit).