



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076.

PR No. 1000036545

Rfx No. 6100001593

Technical Specification for Microplate Multimode Reader

Sr. No	Detailed Technical Specification	Compliance (Yes/No)
1	<ol style="list-style-type: none">1. Wavelength Selection: It should have tuneable grating Monochromator for multimode wavelength selection2. Detection mode: microplates and cuvette for absorbance3. Read methods: It should perform Endpoint, kinetic, spectral scanning and well area scanning measurements4. Microplate types: It should be able to read standard 6, 12, 24, 48, 96 and 384-well microplates.5. Cuvette Port: It should have a dedicated in-built cuvette port and allow vertical reading of cuvette	
2	<ol style="list-style-type: none">1. Accessories: It should be supplied with Micro-Volume reusable plate which is capable to read very small volume (2μl) of samples for Nucleic acid and Protein quantification	
3	<ol style="list-style-type: none">1. Temperature control: Ambient + 4°C to 65°C.2. Temperature control should be by Natural Convection to prevent edge effects.3. Must have temperature gradient setting to prevent condensation in lidded plates4. Shaking: It should have Orbital, double orbital and linear shaking	
4	<ol style="list-style-type: none">1. Software: Data Analysis software with multiple user license dongle-free should be supplied with the instrument. Should be able to perform data analysis.2. There should be provision to export data to Excel.	



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5	<ol style="list-style-type: none">1. Absorbance Light source: It should have Xenon flash lamp2. Wavelength selection: It should have Monochromator.3. Should be able to select Wavelength in 1 nm or greater increments4. Wavelength range: 200 - 999 nm5. Bandpass: 2.9 nm6. Detector: Photodiode detector7. Dynamic range: 0.0 - 4.0 OD8. Resolution: 0.0001 OD9. Monochromator wavelength accuracy: +2 nm10. Monochromator wavelength repeatability: +0.2 nm11. OD accuracy: 0 to 2.0 OD + 1% + 0.010; 2.0 to 2.5 OD + 3% + 0.01012. OD linearity: 0 to 2.0 OD + 1% + 0.010; 2.0 to 2.5 OD + 3% + 0.01013. OD repeatability: 0 to 2.0 OD + 1% + 0.005; 2.0 to 2.5 OD + 3% + 0.00514. Stray light: 0.03% at 230 nm15. Reading speed: 96 wells sweep read: 8 seconds or less16. Reading speed 384 wells sweep read: 14 seconds or less	
6	<ol style="list-style-type: none">1. Pathlength Correction: Pathlength Correction feature should be available.2. Software for instrument control and Data Analysis should be supplied along with the instrument	
7	<ol style="list-style-type: none">1. Connectivity: It should have USB port for PC connection.2. Suitable PC with minimum Intel i5 processor, 8 GB RAM, 1 TB HDD, USB Port, 22" Colour Monitor, Keyboard, Mouse, Windows 11 Pro (64-bit), MS Office 2019 should be supplied to run the unit.3. Power: 100-240 VAC 50/60 Hz4. Instrument should be CE and TUV marked. It should be RoHS Compliant	



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8	<ol style="list-style-type: none">1. The System offered must be available on Website of Manufacturer or on a Brochure2. Minimum 3-year on-site warranty is required.3. Supplier must have an active support in Mumbai.4. A qualified factory-trained engineer shall conduct on-site installation, commissioning and training free of cost.5. Suppliers should not quote components which are being phased out by the manufacturer.6. Supplier should quote the amount inclusive of the delivery and installation of the equipment till the delivery location.	
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