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MATERIALS MANAGEMENT DIVISION
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Detailed Technical Specifications for Multimode Microplate Reader:

1. A Multimode Reader with following Detection Chemistries in Monochromator Mode (no filters required) - UV-VIS Absorbance, Fluorescence Intensity (Top and Bottom), Luminescence. The same system should be field upgradable to Dual Injectors for Flash Luminescence.
2. Band width for Absorbance - 4.0 nm.
3. System should offer excitation light source as Xenon Flash lamp.
4. System should have PMT for Fluorescence & Luminescence & Silicon Diode for Absorbance. Preferably Ultra cooled PMT upto - 5°C for Fluorescence and Luminescence.
5. System should offer Path check facility or path length correction to automatically normalize well absorbance equal to 1cm path length of a cuvette for spectrophotometric datas.
6. Well Scanning in all modes should be possible.
7. System should offer programmable Infinity/linear and orbital microplate shaking methods.
8. System should offer temperature control in the microplate chamber from 5°C above ambient to 65 °C.
9. System should offer ability to read 6 to 384 well plates.
10. System should perform Spectral Scanning, Kinetic Reading and End-point reading.
11. The system should have preferably built-in near-field communication (NFC) functionality in the reader enabling to pull up custom protocols with a single tap.
12. **Absorbance photometric performance :**
 - a) Wave length range – 230- 1000
 - b) Wavelength Selection: Monochromator, tunable in 1.0 nm increments.
 - c) Dynamic Range: 0-4 Abs or better.
13. **Fluorescence Performance :**
 - a) Reading Capabilities: Top & bottom of a Microplate
 - b) Wavelength Range: 250 – 850 nm
 - c) Wavelength Selection: Monochromator, tunable in 1.0 nm increments.
 - d) Dynamic range > 6 logs
 - e) Sensitivity – Top Read - 96 wells 1 pM, Bottom Read – 96 wells 2 pM.
14. **Luminescence Performance :**
 - a) Flexibility to select Glow Luminescence mode
 - b) Wavelength range: 300 – 850 nm or better
 - c) Wavelength Selection: Monochromator.
 - d) Dynamic range > 7 decades.
 - e) Sensitivity – (ATP Glow) - 96 wells 2 pM
15. System should be quoted with low volume plate for DNA, RNA, and Protein quantification upto 2ul sample volume for minimum 24 samples simultaneously
16. System should be quoted with Cuvette Adapter
17. The system should be supplied with analysis software.
18. The system should have inbuilt Touch screen to run the protocol without the need of computer.
19. Warranty – One Year from the date of installation.