




**Tender document  
Department of BSBE  
Indian Institute of Technology Kanpur  
Kanpur (UP) 208016 India**

**Enquiry No: IITK/BSBE/AKS/21-22/40222  
Sub.: Inquiry for multi-mode plate reader  
Inquiry date:04/02/2022  
Last date:17/02/2022  
Opening date:18/02/2022**

**Sealed quote (Technical bid and price bid separately sealed) are invited for the above-mentioned laboratory product as per the technical specifications given below:**

**Terms and Conditions:**

1. Maximum discount on the product should be offered.
2. Quotations should be valid for minimum 90 days, or more.
3. Complete bank details should be submitted.
4. Delivery period should be 4-6 weeks after receipt of purchase order.
5. IIT Kanpur is fully exempted from payment of GST on imported goods against our DSIR certificate.
6. IIT Kanpur is partially exempted from payment of customs duty and exemption certificate will be provided.
7. Manufacturer authorization certificate from principal company is required if you are a distributor.
8. Include proprietary item certificate, if applicable.
9. The Institute reserves the right of accepting or rejecting any quotation without assigning any reason thereof.
10. All prices should be mentioned including delivery and installation to IIT Kanpur.
11. Payment terms should be 100% after supply, installation and demonstration of the material.

  
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## Technical Specifications for Multi-mode plate reader

**Key specification:** The multi-mode reader should allow measurement of bioluminescence, fluorescence and UV-Visible absorbance in micro-well format with comprehensive five-year on-site warranty.

### Additional specifications:

#### General Specifications:

- The system should have detection modes for luminescence, Fluorescence intensity, FRET, TRF, and UV-Vis absorbance and should be upgradable to other detection modes like FP, AlphaScreen assays and also on-board reagent injectors for flash luminescence assays
- Measurement modes like Endpoint, Kinetic measurements, Well scanning and spectral scanning in absorbance mode
- Well Scanning mode with 900 data points per well, 3-D profile of the well, individual reading and statistical analysis like average, Sum, Min, Max, etc
- Should be compatible to all SBS format 6 to 384-well Microplates
- Temperature control from ambient +5°C to 45°C
- Read Times Flying mode: <20 sec for 96 well plates & <55 sec for 384-well plates
- Linear and orbital shaking modes with user-definable time and speed

#### Luminescence Mode:

- Top & bottom mode reading
- Wavelength Range: 300 - 740 nm
- Detector: Photomultiplier tube
- Should have the provision to choose the wavelength selection by selective filters for assays like BRET1, BRET2, nanoBRET. Instrument should have 6-8 filter positions.
- Sensitivity : < 20 amol/well ATP

#### UV-Vis Absorbance mode:

- Spectrometer based UV Visible Absorbance measurement for entire spectrum instantaneously
- Spectral Range : 220-1000nm
- Spectral scan resolution with user choice of 1nm/2nm/5nm /10 increment
- Light Source : Xenon Flash lamp
- Detector : CCD array
- OD range of 0 to 4.00
- Ultra-fast UV-Vis spectral scan taking < 1 sec / well

#### Fluorescence Mode:

- Top & bottom mode reading
- Light Source : Xenon Flash lamp
- Detector: Photomultiplier tube
- Wavelength Range: 240 - 740 nm
- Wavelength selection: By optical Filters, with on-board 6-8 positions each on Excitation and emission filter wheel
- Sensitivity : Fluorescence intensity < 0.3 fmol/well Fluorescein
- TRF mode < 30 amol/well Europium
- Should be possible to do Single excitation and dual/multiple emission detection sequentially for FRET, TRF assays
- Sensitivity : < 20 amol/well ATP

#### Software:

- License free Control & Data Analysis Software to install on multiple computers
- Should be possible to create USERS, set passwords and select path for data storage
- Software should be Compliant with US FDA regulation 21 CFR Part 11
- Real-time kinetic monitoring, Pause & resume Kinetic runs should be possible
- Calculation based on Standard Curves, User defined formulas, Ratiometric analysis,
- Parallel Line Analysis
- System should be supplied with high-quality desktop PC with suitable configuration for the above instrument