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

Enquiry No: ITK/BSBE/SP /22-23/140522
Sub.: Inquiry for multi-mode plate reader
Inquiry date:12/05/2022
Last date:23/05/2022
Opening date:24/05/2022

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.

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:

- Microplate reader with detection modes Standard fluorescence intensity, FRET, TRF, TR-FRET/HTRF, Luminescence &UV-Visible absorbance included
- Should be possible to upgrade to Fluorescence Polarization& Alpha Screen assays on the same system, atleast two on board dispensers
- Measurement Modes like Endpoint and Kinetic measurements, Sequential& Simultaneous Multi Excitation measurements / Multi Emission measurements,
- 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 and low volume (2ul)
- Low volume (2ul) plate for DNA/RNA/Protein measurements should be included
- Temperature control from ambient +3°C to 45°C
- Read Times Flying mode:<10 sec for 96 well plates &<18 sec for 384-well plates
- Linear and orbital shaking modes with user-definable time and speed

Luminescence Mode:

- Wavelength Range:240 - 740 nm
- Detector: Photomultiplier tube
- Wavelength selection by selective filter should be possible
- Sensitivity: < 20 amol/well ATP
  Should be possible to have upto two onboard injectors to dispense reagents and initiate kinetic events
  - Injection at measurement position (6 to 384-well)
  - Variable injection speed up to 420 µL / s

UV-Vis Absorbance mode:

- Wavelength Range: 220 - 1000 nm, OD range: 0 to 4 OD
- Light source: High energy long life Xenon flash lamp
- Detector: CCD based advanced Spectrometer / Photo diode Array based
- Scan Speed: should be possible to scan full wavelength spectrum in less than 5 sec/well
  Should be possible to set scan between 220 – 1000nm without limitation on number of data points
- Accuracy: ± 1% at 2 OD& Precision: ±0.5% at 1 OD and ± 0.8% at> 2 OD Pathlength correction to normalize to standard ODs at 10mm

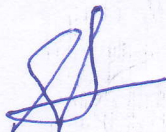### Fluorescence Intensity/TRF/TR-FRET Mode:

- Wavelength Range :240 - 740 nm
- Light source: High energy long life Xenon flash lamp
- Detector: Photomultiplier Tube (PMT) Top and bottom reading should be possible
- Wavelength selection: only by optical Filters with on-board 6-8 positions each for Excitation and emission filterson the wheel /slider
- Sensitivity: Fluorescence intensity: < 10pM (< 0.2 fmol/well fluorescein, 384sv,20µL)
- TRF mode < 30amol/well Europium

- High end TRF/TR-FRET: < 3 amol/well europium
- Gain control: Automatic gain adjustment and software selectable

Control & Data Analysis Software:

- License-free software possible to install on multiple computers
- Compliant with US FDA regulation 21 CFR Part 11
- Should be possible to create USERS, set passwords and select path for data storage
- Should be possible to create shortcut icons for frequently used protocols
- Versatile kinetic software features for endpoint, long-term and fast kinetic measurement
- Real-time kinetic monitoring should be possible
- Template manager for transferring standards, building complex data processing protocols and using default templates
- Calculation based on Standard Curves, User defined formulas, Ratiometric analysis, etc
- Should be supplied with Desktop computer with Intel Core i3 processor, 4GB RAM, 1 TB HDD, 18" Monitor, Keyboard, Mouse, Windows 10 OS

Warranty: Five years from the date of Installation

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