I/105738/2023

KSCSTE - Jawaharlal Nehru Tropical Botanic Garden & Research Institute

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e- tender notice

Tender No. JNTBGRI/1769/VGY/P14/PS/23 17-01-2024
E-tender Id: 2023_KCSTE_635089_2

e- tenders are invited from competent vendors for the supply of Multimode Microplate Reader with the following specifications at JNTBGRI, Palode, Thiruvananthapuram.

Sl. No.	Item with complete Description	Qty
1	**Multimode Microplate Reader** **Technical Specifications:** •The instrument should be a spectral scanning multimode microplate reader capable of performing absorbance, fluorescence, luminescence studies. •The reader should be future upgradeable for AlphaScreen/AlphaLISA and homogeneous time resolved fluorescence (hTRF) applications. •Auto gain facility should be available, not the default setting in software. Instrument should automatically calibrate results with different gain settings to obtain single consistent measurement range. •Self-diagnostic option and auto-calibration during the starting of the instrument as well as during longer kinetic assays. •Dynamic range for the fluorescence and luminescence should be mentioned and approximately it should be more than 6 to 7 decades. •The quoted instrument should have future upgradation option with dual dispensers •Onboard Incubator and shaker should be available. Incubation temperature should be from ambient+5°C to 45°C and orbital shaker with adjustable speed and diameter. •System should be supplied with Analysis software with unlimited user license. •Single software program should allow any number of measurement steps (different detection modes) within the program. •Orbital Shaking with adjustable timing, speed and diameter. Automatic safety control based on the shaking speed and plate format to avoid spilling of the liquid from wells. •No loss of already measured data even in case of power failure. •Automatic smart safety checks like plate check, prime check, position sensors, shaker check and dispensing volume check. •Should be a CE certified model. **Optical System:** •Instrument should have quadruple monochromator based, double excitation and double emission monochromators for fluorescence applications. •Instrument should have double monochromators for photometric (UV and Vis) measurement. •The instrument should have a single lamp source and separate detectors	1 unit

for photometry, fluorometry.

Absorbance / Photometry

•Measurement range in Photometry: 200-1000 nm

•Read out range: 0-6 Abs.

•Linear measurement range in photometry: 0-4Abs at 450 nm, ±2% (96-well plate) and 0-3Abs at 450 nm, ±2% (384-well plate).

•Instrument should have on-board pathlength correction for direct quantification.

•Accuracy & Precision: 0.003 Abs and SD<0.001 Abs

•Plate type: 6 well to 384 well format, also compatible with low volume (2-10µl) analysis plate for nucleic acid and protein estimation.

Fluorescence/ Fluorometry:

•Fluorometry wavelength selection: Excitation range: 200-1000 nm, Emission: 270-840nm.

•Fluorescence intensity sensitivity of ≤0.4 fmol (Top read) fluorescein per well with 384 well black plates

•Read type: Top read & bottom read

•Plate Type: 6 well to 1536 well format

•Dynamic range: >6 decades (top read)

Luminometry:

•Luminometric sensitivity of ≤7 amol ATP/well with 384 well white plate using flash ATP reaction. Should have spectral scanning option.

•Luminometry should have normal and filter-based measurements mode with excellent sensitivity.

•Dynamic range >7 decades.

Data Analysis Software:

•System should be supplied with analysis software with unlimited user license.

•Software should be compatible with Windows 11 Pro, 64bit OS, 8 GB RAM.

•Lap top with Windows 11 Pro, 64bit OS, 16 GB RAM compatible to the instrument quoted should be supplied.

•Should have different file formats during data export which includes .xlsx, .pdf, xml, and .txt

•Software should have option for area selection. i.e. different protocols at different area of the same plate.

•Spectral scanning of all 96 samples or 384 samples should be able to view in single graph plot.

•Single software program should allow any number of measurement steps within the program

Tender Form fee : Rs.1500/-+ GST 12%
EMD – Rs. 15,000/-
Place and date of issue of the tender form: Online (www.etenders.kerala.gov.in)
Last date & time of receipt of filled tender bids: 24.01.2024 Upto 5.00PM
Date & time of opening of tender bids : 27.01.2024 at 10.00 AM
DR. S PRADEEP KUMAR. **DIRECTOR(I/C)JNTBGRI**