

Department of Biotechnology, University of Kerala, Kariavattom,
Thiruvananthapuram, Kerala, India - 695581

TENDER -Pl.A1/Bio-tech/1489/17

Dated 08.02..2017

E-Tender Notice

Department of Biotechnology, University of Kerala, Kariavattom, invites open tender through e-Procurement (two cover system) from the Original Equipment Manufacturers or their Authorised Dealers for the Supply, installation and commissioning of Chemiluminescence Imaging System.

Last date and time for submission of tender online	27.02.2017 at 5.30 p.m
Last date and time for submission of tender offline	27.02.2017 at 5.30 p.m
Date and time of opening of tender	03.03.2017 at 11.00 am
Hard copies of the sealed tenders to be submitted to the office of	The Registrar, University of Kerala, Senate House campus, Palayam Trivandrum- 695 034, Kerala Tel: +91-471-2305631, 2386202 (O) e-mail: regrku@gmail.com
For technical details contact	Dr. A. Jayakumaran Nair, Professor and Head, Department of Biotechnology, University of Kerala. Phone No. 9447059164 E-mail: jekksnair@gmail.com

For further details logon to www.etenders.kerala.gov.in

1. Chemiluminescence Imaging System

Specification

- System with true 16 bit or better CCD camera; pixel density of 65,536 gray levels.
- Individual pixel size should be at least 4.54 x 4.54 μm or bigger.
- Camera resolution > 6.1 megapixel.
- The instrument should provide excellent quantitative data from a single blot having very intense and weak signals in a single image; to facilitate the same instrument's dynamic range should be at least 4 orders of magnitude.
- Instrument should provide highest level for sensitivity and hence must have minimal dark current with maximum limit of 0.002 e/p/s and low read noise of not more than $6e^-$.
- The camera should have peltier based cooling of minimum -25°C .
- Quantum efficiency at 425 nm should be 50% or more and peak quantum efficiency as 75% or better.
- Motorized zoom fast lens with f/0.95
- Light sources should include - Trans-UV, trans-white, stain-free and should have option of trans-blue light (for SYBR safe DNA application).
- Instrument should have provision for protective UV shield for use during band excision with safety interlocks to avoid un-intentional UV exposure to the user.
- The imaging area should be 17.5x14 cm or more
- Should provide image acquisition with automatic zoom, focus, and iris adjustment without the need for users to focus or adjust aperture settings.
- The instrument should be provided with onboard touchscreen of 12.1" with multi-touch capability (4 points) enabling users to easily interact with the touchscreen to

- acquire, assess and export images. Touchscreen actions should include - tap, double tap, pan, scroll and pinch to zoom.
- Instrument should have multiple input/output ports with minimum 3 USB ports allowing users to connect USB devices (like keyboard, mouse, data storage, and printer). One USB port should be provided on the front panel for easy export to USB. Also, system should have one Ethernet port so that users can transfer image files to networked computers.
 - Calibrated flat fielding for ensuring uniform data for all applications. System should be calibrated for image area, focus, and flat field correction..
 - The measure of non- uniformity of the Imaging system should be $\leq 10\%$ linear deviation when measured horizontally across the Imaging area of 17.5 cm x 14 cm

The system should be capable of the following applications /and should work with following dyes

1. Chemiluminiscence
2. Chemi fluorescence
3. Infra-Red fluorescence
4. Imaging of Small animal models
5. Imaging of Small tissue slices
6. ELISA
7. Southern Blot
8. Quantum dots
9. Silver stain
10. Ethidium Bromide
11. Coomassie Blue
12. Flamingo
13. Nano orange
14. Sypro ruby
15. Sypro orange
16. Sybr safe
17. Sybr gold
18. Stain Free gels and stain free blots

System Software–

- 1) Software should have highest level of automation in hardware calibration, image optimization, capture, and analysis.
- 2) Should have automated workflow recorded in a protocol file from image capture to results thus eliminating need for training.
- 3) Should allow 100% repeatability of the workflow by any user and ensures optimized image data and analysis from a gel in a single uninterrupted, fast, and completely reproducible workflow.
- 4) Should have automated image capture driven by a selected gel or blot application.
- 5) Should generate publication ready images with user defined dpi, dimension and format with one click export option thus eliminating the need of using other software like Photoshop.
- 6) Should generate customizable reports.
- 7) Should have feature for Automatic print when only imaging and printing is required.
- 8) Software should have easy copy/paste functionality, crop, zoom, 3D and colors.
- 9) Signal Accumulation Mode (SAM) for easy optimization of exposure time for chemiluminescent detection.
- 10) Software should be both PC and Mac compatible.
- 11) Software should be provided for minimum 20 users with complete analysis features.
- 12) Software should be able to export images on a 16-bit and 8-bit tiff images with a one-click export option.
- 13) Software should be able to export images in multiple formats with minimum options of exporting in .tiff, .png, .jpg and .bmp
- 14) Software should have unlimited undo and redo functions to easily correct for any missteps with additional features like easy copy/paste, crop, zoom, 3D viewer and colors.
- 15)** Software should have automated normalization feature for normalizing western blot signals of target band with either a housekeeping protein band or total lane protein.

General Conditions:

1. The tender shall be submitted in the two bid viz. Technical Bid and Financial Bid. Only those qualified in technical bid will be eligible for participating in financial bid. A presentation regarding the technical specification and item to be supplied shall be done before the technical evaluation committee if requested.

2. The bidder should be a manufacturer or their dealer specifically authorized by the manufacturer to quote on their behalf for this tender as per Manufacturer Authorization From and Indian agents of foreign principals, if any, who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the “Technical Specification”. Such equipment must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful operation for at least one year as on date of Bid Opening.
3. **Compliance Statement:** Along with the technical details provide a tabular column indicating whether the equipment quoted by you meets the specifications by indicating 'YES' or 'NO'. If 'YES', support the claim by providing original brochures. **Vendors should provide clear brochures/data sheets about the equipment and it's working. Also include adequate proof for the claim regarding the performance.**
4. **Reference:** Names of Institutes with contact person and telephone/ email where similar equipment supplied by you in India [Preferably South India] shall be mentioned in the bid.
5. Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.
6. The price should be inclusive of all taxes, duties, transportation, insurance, installation etc. Nothing extra will be paid in addition to the quoted rate. Any amount in Indian rupees for installation, commission, labour, spares, service etc shall be entered in item 2 of BoQ.

7. Payment Terms: 90% payment shall be made through irrevocable LC on presentation of complete and clear shipping documents and balance 10% of the amount shall be released after the receipt, installation commissioning and acceptance of the equipment.
8. Validity of tender: Tender submitted shall remain valid at least for 120 days from the date of opening the tender. Validity beyond 120 days, from the date of opening of the tender shall be by mutual consent.
9. Every tenderer should submit an Earnest Money Deposit (EMD) of Rs. 50,000/- or equivalent Bank Guarantee valid upto the installation of the equipment.
10. Every tenderer should submit Tender fee of Rs. 2500/-
11. Delivery and installation: Proposed delivery schedule should be mentioned clearly. Delivery and installation and training (one week) should be made at the Department of Biotechnology, University of Kerala, Kariavattom campus, Trivandrum without extra cost. University of Kerala will provide customs duty exemption certificates if required.
12. Service facility: Supplier should mention their details of service setup and manpower in Thiruvananthapuram who are responsible for after sales support.
13. The model number, make, and a printed literature of the product shall submit positively.
14. In case of any dispute, the decision of the University authority shall be final and binding on the bidders.
15. The undersigned reserves the right to reject any or all of the tenders received without assigning any reason thereof.

16. If any component is found to be defective during the warranty period, the vendor has to replace the defective item immediately at their own cost.

17. Warranty: 3 years complete warranty for the instrument

Documents to be Uploaded

- 1 Signed Compliance Matrix
- 2 Detailed Technical Brochure
- 3 Under taking of support for next 10 Years
- 4 BoQ
- 5 DD/Hard copy of Bank Guarantee if opted

The Registrar,

University of Kerala,
Senate House campus, Palayam , Trivandrum- 695 034, Kerala.