



**DEPARTMENT OF BIOTECHNOLOGY**  
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D.KARUNAGARAN  
Professor and Head

Date: 22.01.2015

**Ref: BT/SMAH/2014/035/SPL**

**Dt. 22.01.15**

**Due Dt.30.01.15**

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.
2. The quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for should be submitted free of charges and collected back at the supplier's expenses.
6. **Local Firms:** Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates of Sales/General Taxes and the percentage of such other taxes legally livable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales/General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes livable should take into consideration that we are entitled to have concessional sales tax applicable to non-government educational institutions run with no profit motive for which a Concession. Sales tax certificates will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

## **Imaging Equipment for Chemiluminescence:**

### **Applications:**

- Proteomics and Genomics studies
- 2-D protein gels
- 1-D nucleic acid and protein gels
- Western blots – Chemiluminescence
- Northern and Southern blots

### **Equipment Specifications as follows:**

- System with true 16 bit CCD (0-65,535 levels), with more than 4 Megapixel image resolution.
- Cooled CCD with cooling range of -30°C absolute temperature using peltier cooling system (Not air cooled)
- System with dynamic flat fielding technology for having accurate Quantitation CV < 5 %.
- System should have five different modes of illumination – Trans-UV, epi-white, no illumination for chemiluminescence. Trans-white, Trans-blue being optional.
- Instrument should have a large trans illumination area of which is capable of taking sample size of 28x36 cm.
- Instrument should have auto focus technology that is system should automatically take the best focus depending on any zoom level without the movement of sample platform. The sample platform should be fixed at one position to ensure minimal mechanical movement.
- Pixel size should be 6.45 µm x 6.45 µm or bigger.
- Instrument should have a minimum 3 position filter wheel for capturing images of various dyes effectively. The filter wheel should be motorized and automatic without the requirement of manually changing or moving the filter wheel.
- Dynamic range should be >4 orders of magnitude for good quantification.
- Pixel density should be at least 65,535.
- System should offer various binning options with minimum of 2x2, 3x3 and 4x4 for customized sensitivity.

### **Software for Image acquisition and Analysis with Multiple License**

- Automatic generation of customizable reports
- Snapshot tool to copy images, lane profiles, and graphs
- Complete flexibility with automatic and manual detection of lanes and bands, using several algorithms
- Easy copy/paste functionality, crop, zoom, 3D viewer, and colors.
- Publishing resolution (dpi) and publishing dimension can be specified with a one-click image export for publication. Provides functionality to produce image at user-defined dpi and dimension
- 16-bit and 8-bit tiff images with a one-click export option
- The Software should automatically select the appropriate filters, light sources, and camera settings for all applications. Ensures that image optimization is specific to a selected gel or blot application or can be used for a large portfolio of detection methods. Applications including: Chemiluminescent, colorimetric and nucleic acid and protein detection via colorimetric and fluorescent stains.
- Software should have Signal Accumulation Mode (SAM) for easy optimization of exposure time for chemiluminescent detection.

- Software should produce customizable reports with data organized as desired, including, Lane and band identification, molecular weight or base pair evaluation. Band sizing and quantification are based on a reference band or quantity standards.
- Automatic and manual methods for molecular weight determination, purity assessment, and relative and absolute quantification.
- Software should offer live update of results with any change of analysis parameters.
- Software should have multiple image optimization tools like unlimited undo and redo functions are available to easily correct for any missteps additional features include easy copy/paste functionality, crop, zoom, 3D, and colors.

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