

**Department of Chemical Engineering  
Indian Institute of Technology, Delhi**

September 5, 2011

**Subject: Quotation for Multiwave Length Absorbance Reader**

Following Specification are required for the Multiwave Length Absorbance Reader

System should include the following detection modes

Fluorescence Intensity, UV-Vis Absorbance & Glow Luminescence detection. System should be capable of measuring end-points kinetics, spectrum and area well scanning read types. The system should have a Cuvette port & Microplate Drawer. The cuvette port should be compatible for both Absorbances as well Fluorescence Chemistries.

**1. General Photometric Performance**

Plate formats	:	6, 12, 24, 48, 96, 384 wells and Cuvette Ports
Light Source	:	Xenon Flash Lamp (1 joule / flash)
Detector	:	Photomultiplier
Read Time	:	96-well: Abs 18 sec., FI 15 sec. 384-Well: Abs 49 sec., FI 45 sec.
Shaker Time	:	0 to 999 seconds
Temp Control	:	4 ° C above ambient to 45 ° C,
Temp Uniformity	:	< 1 ° C at 37 ° C set point
Temp Accuracy	:	+/- 1 ° C at 37° C set point,
Reading Modes	:	End Point reading / Kinetic reading / Spectral,
Scanning	:	All Modes
Well Scanning	:	Abs., FI, TRF, Lum

**2. Absorbance Photometric Performance**

Reading Capabilities	:	Cuvette or Microplate
Wavelength range	:	200-1000nm,
Wavelength selection	:	Monochromator, tunable in 1.0nm Increments,
Wavelength bandwidth:	:	≤4.0nm,
Wavelength accuracy	:	+/-2.0nm,
Photometric range	:	0 to 4.0 OD,
Photometric Resolution:	:	0.001 OD,
Photometric Accuracy (Microplate)	:	< +/-0.006 OD, +/- 1.0 %, 0-2 OD,
Photometric Accuracy (Cuvette)	:	< +/- 0.005 OD +/- 1.0 %, 0-2 OD,
Photometric Precision	:	< +/- 0.003 OD +/- 1.0 %, 0-2 OD,
Stray Light	:	< 0.005 % @ 230nm

**3. Fluorescence Photometric Performance**

Reading Capabilities	:	Top or Bottom of a Microplate,
Dual Monochromators:	:	1nm Increments EX 250 – 850nm EM 250 – 850nm
Bandwidth (EX, EM)	:	9, 9 nm
Top-read detection limit:	:	3.0fmol/well FITC 200ul in 96 wells (Signal 3 X std. Dev. Of baseline)
Bottom-read detection Limit:	:	5.0 fmol/well FITC 200ul in 96 wells (Signal 3 X std. Dev. Of baseline)



#### 4. Time resolved Fluorescence

Wavelength range	:	250 – 850nm
Data Collection	:	50 – 1450 usec, 200usec, increments
Sensitivity	:	0.5 fmol/well Eu-chelate

#### 5. Luminescence Performance

Wavelength Range	:	250 – 850nm
Wavelength Selection	:	all wavelength or with selected wavelengths
Detection Limit	:	10amol/well alkaline phosphatase 200ul / well

Software integrated system which provides data acquisition, analysis and management capabilities, allowing cross-plate analysis and custom calculation. The system should have a Path check technology to reproduce the data similar to that of 96 and 384 cuvettes values as in spectrophotometer and without a need to export the data to a spreadsheet.

Required computer and printer to supplied along with the system.

Warranty for 36 months.

#### **Terms and Conditions:**

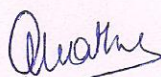
1. Quotations must be made in sealed envelopes. Technical and Commercial bids must be sent separately in two sealed envelopes and then put together in one envelope. The quotes must reach the following address by 27<sup>th</sup> September 2011 by 17: 00 hours latest.

Dr. A. S. Rathore  
Department of Chemical Engineering,  
Block II, Room No. 94,  
Indian Institute of Technology, Delhi  
Hauz Khas, New Delhi – 110016

2. Price must be quoted FOB New Delhi.
3. Indian agency certificate must be enclosed.
4. Proprietary certificate might be enclosed if applicable.
5. Payment after installation.
6. Validity of quotation should be at least 3 months.
7. Period of delivery should be mentioned.
8. Educational discount should also be mentioned.

#### Remarks:

The Institute reserves the right to accept or reject any all the quotations without assigning any reason thereof.



Dr. Anurag S. Rathore  
Department of Chemical Engineering  
IIT Delhi  
Tel: 011 – 26596242  
Email: asrathore@biotechcmz.com