



INSTITUTE OF PHYSICS

(An autonomous research institution of Dept. of Atomic Energy, Govt. of India)

P:O: SAINIK SCHOOLBHUBANESWAR 751 005, INDIA

Tender No. IOP/LAB/04-05/001

Item-wise quotations are invited from manufacturers / authorized dealers for supply of the following laboratory items so as to reach the undersigned or before 30.7.2004 up to 3.00 P.M.

Sl	Description	Quantities in Nos.
1	Liquid Helium Dewar, capacity – 100 ltrs	4
2	Cryo vessel for LN ₂ , capacity – 3000 ltrs	1
3	Resistive Evaporator for Au/Ag with power supply unit	1
4	Electro luminescence/Spectral Response System	1
5	High purity Germanium Detector	1
6	Si-PIN Detector for X-ray with high voltage power supply and amplifier	1
7	Spectroscopic Amplifier	2
8	Detector Bias Power Supply	1
9	UPS 15 KVA	4
10	Servo Voltage Stabiliser 15 KVA	4
11	D.C. Power Supplies (0~1.5kV, 75 watt)	4
12	Digital Pico Ammeter	1
13	Fiber optics lab kit	1
14	Mini Printed Circuit Board fabrication Plant maximum size 1ft X 1ft	1
15	Turbo molecular pump 250 ltrs with accessories	2
16	Total Station Laser based Theodolite	1

Quotations specifying rates, applicable taxes along with technical specifications / brochures and terms & conditions for supply should be sent in sealed envelope and addressed to the undersigned with super inscription “Quotation for supply of _____ (name of the item). The Institute is a non-profit making educational & research organization for which special discount if any, should be specifically mentioned. For details of specification of the above items please visit the website www.iopb.res.in.

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

DIRECTOR

SPECIFICATIONS

- 1. Liquid Helium Dewar.** **4nos**
Capacity :- 100ltrs
Inner vessel:- SS304
Operating pressure:- 69KPa approximately
Static Evaporation ratio:- As less as possible
Standard safety valve and transfer device
- 2. Cryo Vessel for LN2.** **1no**
Mounting:- Vertical
Capacity :- 3000ltrs
Inner vessel:- SS304
Outer vessel:- Carbon steel
Maximum allowable pressure:- 10kg/cm² approximately
Operating pressure:- 1.2kg/cm² approximately
Static Evaporation ratio:- As less as possible
- 3. Resistive Evaporator with the power supply unit.** **1no**
Vertical resistive evaporator for Au/Ag
Configuration:- Vertical
Mounting Flange:- DN40CF
- 4. Electroluminescence/Spectral Response System.** **1no**
Spectrometer with PMT detection system for Electroluminescence.
Spectral response system set up . Focal length 180-250mm.
Resolution 0.5mm or better. Automated slit system. Built in RS232 and IEEE interface . The complete data acquisition and data analysis software to be provided.
- 5. High purity Germanium Detector.** **1no**
a)Co-axial type (N type)
b)Relative photopeak efficiency: 60%
c)Window thickness: Quotation for different window thickness to be provided
d)Energy resolution (FWHM): 1.8-2.6 keV at 1.33 MeV
e)Dewar- 30 liters (Streamline Horizontal Cryostat with offset or side looking dewar)
- 6. Si-PIN X-ray Detector with high voltage power supply and amplifier.** **1no**
a)Detector area: 5mm² - 10mm²
b)Energy Resolution: 160-190 eV at 5.9 keV

- c) Be window: Less than 8 micron
- d) Detector thickness: About 300 micron
- e) Detecting range: 1-30 keV
- f) High Voltage: 0 to 5KV, Current 0 to 100 microamp
- g) High Voltage polarity: Both positive & negative
- h) Amplifier: Suitable for Ge, Si(Li) detectors

7. Spectroscopic Amplifier. 2nos

- a) Single width NIM module.
- b) Automatic noise discriminator for both the pileup rejection and the baseline restorer.
- c) Suitable to use with Ge, Si (Li) and Scintillation detectors.
- d) Shaping time: Multiple shaping times of 1, 2, 3, 6, 10 micro sec etc.
- e) Gain: 0-1500 approximately.
- f) Input (+ve/-ve signal): Uni/Bipolar.
- g) Output: Uni/Bipolar.
- h) Noise: <5 μ V (RMS) for Unipolar output for 3 μ s shaping time for gain 1000 & above.

8. Detector Bias Supply. 1no.

- a) 0 to -5 kV and 0 to +5kV at 0-100 micro ampere
- b) Remote shutdown feature
- c) Automatic overload protection and overload indicator.
- d) Noise: <10mV peak-to-peak from 5 Hz to 50 MHz

9. 15KVA On Line UPS 4nos

- Input:- 3Ph 400volt(+/-20%)AC, 50Hz+/-5Hz
- Out Put:- 1Ph 230volt(+/-1%)AC, 50Hz+/-1%
- Back Up:- 30 Minute SMF Battery Back Up
- Load:- 100% inductive load and 200% short term over load for 60 seconds both to mains and battery.
- Power Factor:- 0.9 or better

10. 15KVA Servo voltage Stabiliser 4nos

- Input:- 1Ph 230volt(+/-20%)AC, 50Hz+/-5Hz
- Out Put:- 1Ph 230volt(+/-1%)AC, 50Hz+/-1%

11. DC Power Supplies 4nos

- Input Voltage:- 220VAC 50Hz
- Out Put:- 0-1.5KV with remote control and polarity reversal
- Resolution:- Around 0.0025%, +/-1 volt
- Load Regulation:- +/- 0.01%
- Stability:- 0.01%

12. Digital Pico Ammeter (Keithely Model -480 or equivalent) 1no

Range :- 1 nano amp to 10mill amp
Accuracy:- 0.5%
Input Voltage:- Both 110VAC and 220VAC 50Hz

13. Fiber optics Lab Kit. 1no

Fiber optics Kit with analog communication with frequency modulation.
Digital data communication with serial data facility. Plastic fiber optics cable
jointing kit with all accessories

14. Mini PCB Fabrication Plant. 1no

The plant may require processing a PCB of maximum size of 1ftX 1ft single
side only. The plant should have facility of processing ,etching
/milling,drilling of the printed circuit boards.

15. Turbo molecular Pump with accessories , backing pump and power supply. 2nos

Capacity:- 250ltrs/Sec
Mounting flange:- CF type

16. Total Station laser based Theodlite 1no

Reflectorless auto focus total station with
a good stand, a single prism assembly ,
Visible laser pointer ,
Prism range – around 3400m ,
Distance accuracy : around(+/-2mm+2ppm xD)mm

Contact mail address for any technical clarification :

purchase@iopb.res.in