Department of Biotechnology
Pondicherry University
Puducherry-605014

Sealed quotations under single bid systems are invited for the purchase of the following laboratory equipments under DBT project. The quotations can be submitted for one or more equipments. The quotations duly signed and sealed should be submitted to **Dr. Arunkumar Dhayalan, Assistant Professor, Department of Biotechnology, Pondicherry University, Puducherry-605 014.**

The quotation should be sent by post (normal/speed/Registered/courier) only. The price quoted should include all the costs such as delivery, installation, testing etc and also inclusive of all taxes. Warranty terms should be explicitly specified in your quotation. The technical specifications are given below. Last date for receiving quotation is **11.10.2011**

Name of the required items for DBT project:

1. Vertical Electrophoresis unit : 1 No.
2. Horizontal Electrophoresis unit : 1 No.
3. Power Pack Unit : 1 No.
4. Semi-Dry Transfer Unit for Western Blotting : 1 No.
5. Electronic Analytical Weighing Balance : 1 No.
6. Electronic Weighing Balance : 1 No.
7. Digital PH Meter : 1 No.
8. Adjustable Micro-pipette of different Volumes as mentioned below
    a. Volume range: 0.1µl to 2µl : 2 Nos.
    b. Volume range: 2µl to 20µl : 2 Nos.
    c. Volume range: 20µl to 200µl : 2 Nos.
    d. Volume range: 100µl to 1000µl : 2 Nos.
    e. Volume range: 500µl to 5000µl : 1 No.
9. Photometer to measure DNA and RNA : 1 No.
10. Table Top Refrigerated Shaker : 1 No.
11. Small Incubator : 1 No.

12. Small Roller or Rotator : 1 No.

13. Micro centrifuge : 1 No.

14. Vortex Mixer : 1 No.

The detailed specifications of the individual equipments are given below:

1. Vertical Electrophoresis unit

The electrophoresis unit must be suitable for rapid protein screening and nucleic acids combining the advantages of a small format and efficient cooling. The unit should accommodate and run two gels with glass plate size maximum of 10 x 10.5 cm simultaneously and the design of the unit should be flexible to accommodate and run two gels of 10 x 8 cm glass plate sizes with optional accessories. The unit should have the running condition at power settings up to 500 V, 500 mA and 12 W. The unit should accept up to 30 samples at one time under identical power conditions. In addition, the unit must accept a wide range of precast gels that are easily available in the market.

The equipment should be supplied with complete set of accessories including casting cradle with sealing gasket set, casting clamp assemblies, 4 numbers of spring clamps, Gel seal, safety lid with high voltage leads, 10 pieces of glass plates rectangular (10 x 10.5 cm), 5 pieces of alumina plates notched (10 x 10.5), 4 pieces of spacers 0.75 mm thick and 2 pieces of combs (10 wells).

2. Horizontal Electrophoresis unit

The unit must be designed for fast separations of DNA Restriction fragments in agarose gels of gel size of 7 X 10 cm in as little as 5 minutes. The unit should have a maximum sample handling capacity of up to 32 samples. The system must use the technology of passive cooling system providing option to fill the single molded base with 50% ethylene glycol coolant solution. The system should contain a safety lid with high voltage leads. The system should be supplied with UV transparent running tray, height adjustable combs of 1.5 mm thick (8 wells) with comb holder for effective handling, casting tray, 4 pieces of gaskets and bubble level. The maximum buffer volume of the unit should not be more than 250ml. The unit should have the running condition at power settings up to 500 V, 500 mA and 15 W.

3. Power Pack Unit

The versatile power pack unit should be able to run with constant voltage or constant current mode with automatic crossover facility. The variable settings of the power supply must be between the range of 10-300 V, 4-500 mA and 90 W. The unit should able to run 4 electrophoresis units in parallel with suitable sets of 4 output jacks compatible to any standard universal power cords. The unit should have continuous running mode and timed running mode with timer facility ranging from 0-999 minutes. The unit should have all the necessary alarms

with facility of open circuit detection, short circuit protection and current leakage with auto cut off function. The user interface should have LED display and membrane keyboard. The weight of the unit should not exceed 3 kg.

4. Semi-Dry Transfer Unit for Western Blotting

The transfer apparatus should able to transfer gels of size maximium of 14 x 16 cms or should able to transfer up to four mini gels using the stacked format. The unit should support as many as two stackable layers of larger gels for simultaneous transfers. The system must be included with safety circuit breaker function to limit the voltage and current from the user's power supply preventing electrical damage to the transfer unit. The unit must have low power consumption with a maximum power setting of 30 V, 500 mA and 15 W to eliminate the chances of generation of excessive heat. The unit must use minimum quantity of buffer to transfer proteins and nucleic acids in less than an hour providing lower reagent cost and reduced preparation time. The system must have molded base with platinum coated titanium anode, stainless steel cathode lid and high voltage leads. The unit must be supplied with 50 sheets of blotting paper (14 x 16 cm), 50 sheets of porous cellophane sheets (20 X 35.5 cm) and 2 pieces of masks (16.5 x 18.5 cm).

5. Electronic Analytical Weighing Balance

The electronic analytical weighing balance should have internal calibration and possess the following features:

Capacity	: Not less than 210 g
Repeatability (Std Dev)	: Should not be more than 0.1 mg
Readability	: 0.0001g (4 digits)
Linearity (mg)	: Should not be more than 0.3
Weighing platform Size	: should not be more than 90mm diameter
Taring time	: should not be more than 1 sec
Stabilization time	: should not be more than 3 sec
Gross weight	: should not be more than 4.5kg
Application modes	: Weighing, Parts counting, Percent weighing
Weighing units	: mg, gm, carat, ounz, tical, tola and Newton

In addition, the weighing balance should have RS232 interface to connect to the printer, mechanical or software switch to lock menus including calibration and provision to suspend an item below the balance to calculate density or specific gravity.

6. Electronic Weighing Balance

The electronic weighing balance should have the following features

Capacity	: Not less than 200g

Repeatability (Std Dev)	: Should not be more than 0.01g
Readability	: 0.01g
Linearity	: ± 0.01g
Display	: High contrast display with minimum 6 digits
Weighing platform Size	: should not be more than 12 cm diameter
Stabilization time	: should not be more than 3 sec
Net weight	: should not be more than 0.8 kg
Application modes	: Weighing, Parts counting, Percent Weighing, Totalization, Display Hold function
Weighing units	: g, oz, ozt and dwt

In addition, the weighing balance should have an integrated security bracket to prevent theft, lock switch to lock the specific configuration of the unit and provision to suspend an item below the balance to calculate density or specific gravity.

7. Digital PH Meter

The pH meter should be microprocessor based and it should measure both pH and temperature simultaneously and it should have the following specifications and features

pH Range	: 0.00 to 14.00 pH
pH Resolution	: 0.01 pH
pH Accuracy	: ± 0.01 pH
Calibration points	: Should not be less than 3
Temperature range	: 0 to 100ºC
Temperature Resolution	: 0.1ºC
Temperature accuracy	: ± 0.3°C
Weight	: should not be more than 0.6 kg
Display	: LCD display for easy view

In addition, the pH meter should contain IP54 rated splash proof tactile keypad and simple push button for calibration with automatic buffer recognition.

8. Adjustable Micropipette of different Volumes as mentioned below

a. Volume range: 0.1µl to 2µl	: 2 Nos.
b. Volume range: 2µl to 20µl	: 2 Nos.
c. Volume range: 20µl to 200µl	: 2 Nos.

d. Volume range: 100µl to 1000µl : 2 Nos.

e. Volume range: 500µl to 5000µl : 1 No.

All the micropipettes should contain stainless steel piston and magnetic assist technology for low piston forces less than 1.7 kg. In addition, the micropipette should weigh less, should have consistent sample picking up feature, volume setting lock to prevent accidental changes in volume settings, tip ejector and positive lock to hold the tip ejector securely in place.

9. Photometer to measure DNA and RNA

The photometer should be a standalone unit without the need for PC connection. The instrument should have the following features:

Light Source : Xenon flash lamp

Display : 8 line display

Memory : For 100 results (absorption, ratio values, sample number, dilution, date and time)

Time required for the measurement - approximately 3 seconds

Optical Path length : 2mm and 10mm

Interface : RS – 232C, Serial and optional Printer

The instrument should be equipped with automatic calculation of sample dilution, automatic display of Protein & Organic absorbance and measurement of single wavelength without any calculations.

In addition, the instrument should contain programmed methods for dsDNA , ssDNA , RNA , Oligo , OD 600, Protein at 280nm, Lowry , Bradford and BCA methods and Frequency of Incorporation of fluorescent Dye 550/650 (eg: Cy3, Cy5).

Assays endpoints measurements at 340nm, 405nm, 490nm eg., enzymatic activities and cell biological methods should be possible with the instrument. The display should provide information on sample concentration, absorbance value, sample dilution, 260 / 280 ratio and 260 / 230 ratio.

The instrument should be supplied with suitable thermal printer and 200 pieces of disposable plastic cuvettes with UV & Visible transparency between 220 nm to 1600 nm.

10. Table Top Refrigerated Shaker

The size and design of the shaker should allow us to keep the instrument on the table (Table Top Refrigerated Shaker). The instrument should have the interior stainless steel inner chamber and cold rolled, powder coated, corrosion free mild steel exterior. The external dimension of the

instrument should not be more than 600 x 750 x 800 (W x D X H) in mm. The equipment should have **CE certification** to comply international safety measures**.**

The instrument should have the following features:

Working Temperature Range: 5°C to 80°C with an accuracy of +/- 0.1°C for 37°C to 80°C
Shaking Frequency: 30 rpm to 350 rpm
Shaking amplitude: 25mm

In addition, the equipment should have the universal tray to hold 36 numbers of 100ml conical flasks or 25 numbers of 250ml conical flasks or 16 numbers of 500 ml conical flasks or 9 numbers of 1000ml conical flasks or 4 numbers of 2000 ml conical flasks, triple eccentric pin system counter balanced for smooth shaking, micro-processor based PID controller to respond user demands on temperature uniformity, audible & visual safety alarm for temperature deviation, fluorescent lamp for view the culture and **s**tationary tray to hold Petri dishes.

The instrument should be supplied with following accessories.

1. Clamps to hold 100 ml conical flasks : 10 numbers
2. Clamps to hold 250 ml conical flasks : 25 numbers
3. Clamps to hold 1000 ml conical flasks : 6 numbers
4. Clamps to hold 2000 ml conical flasks : 4 numbers
5. Stainless steel stationary tray : 1 number

11. Small Incubator

The small incubator should have broad working temperature range from ambient + 5°C to 60°C and the capacity of the incubator should not be more than 9.5 L. The incubator should have hydraulic thermostat controller for temperature control & stability. The incubator should able to accommodate up to three shelves, 48 Petri dishes and 28 standard 96 well plates. The interior chamber of the incubator should be corrosion resistant and it should contain a wrap around heating elements for uniform heating. The exterior dimensions of the incubator should not be more than 28.5 X 28 X 33.5 cm. The incubator should be supplied with non toxic, Teflon coated thermometer for -20 to 110 degree Celsius with 1 degree resolution and an additional shelf.

12. Small Roller or Rotator

The roller should have the maximum speed of 24 rpm and the nature of motion should be rotating, tumbling and rocking. The roller should have multiple tube holding options for 1.5/2.0 ml, 15 ml (15-17 mm diameter) and 50 ml tubes. The operating conditions of the unit should be +4°C - 65°C, up to 85 % RH non-condensing. The unit should be safe for cold room usage. The equipment should have **CE certification** to comply international safety measures**.**

13. Micro centrifuge

The maximum speed of the micro centrifuge should be 14000 rpm/ 16,000 g. The unit should have brushless maintenance-free rotor, acceleration to maximum speed within 10 seconds. The

unit should have continuous running mode and timed running mode with timer facility (at least 1-30 minutes). The weight of the unit should not exceed 5 kg. The unit should be safe for cold room usage and it should produce minimum noise during operation. The system should be supplied with 18 X 1.5/2 ml rotor.

14. Vortex Mixer

The vortex mixer should have powerful motor & optimized counter balance. The speed range of the unit should not be less than 2750 rpm. The vortex mixer should support two operating modes (Touch and Continuous) and the orbital motion of the mixer should be circular. The operating conditions of the vortex mixer should be broad from 4°C to 65°C. The unit should be upgradable with optional head attachments for accepting microplate and various sizes of tubes such as 0.5 ml, 15 ml and 50 ml. The unit should be supplied with head attachment for 1.5/2 ml tubes.

TERMS AND CONDITIONS

I. General Information:

a) **Last date and time of receipt of the Tender: October 11, 2011 at 3.00 PM**

b) Quotation/ Tender document Fee: Rs.500/-

c) EMD rates: 2.5% of the quoted price

d) Quoting merely the lowest price does not confer any right to any bidder for award of supply order. The University's Purchase Committee, reserves the right to select the equipment any bid under the grounds of specification compliance, technologically advanced quality, proven performance track record, brand reputation, service backup support & training, offer of additional / special features, Compatibility with the existing System, etc.

e) The Quotation/Tender Document Fee and EMD should be submitted along with your quotations.

f) The Tender must be submitted along with the stipulated EMD fee in the sealed cover, super-scribing **"Tender for DBT Project Equipments – Department of Biotechnology**". The name and address of the bidder should also be mentioned at the "From address" space.

g) The Tender should be addressed and posted to the following address by speed, registered post or by courier.

DR. ARUNKUMAR DHAYALAN, Project Investigator and Assistant Professor, Department of Biotechnology, Pondicherry University Puducherry – 605 014

h) Tenders will not be accepted through fax / e-mail.

II. Common Conditions (Import or Indigenous)

1. Price Schedule

The rates should be quoted for a single unit and also for the total quantity required by the University. The price should include the Delivery, installation, training charges, etc. at the respective Department, Pondicherry University. The prices quoted shall remain firm until the Equipment is supplied to the respective Department, Pondicherry University.

2. Quoting the Core price & Tax, Duties, Discount etc.

The taxes / duties / discounts, if applicable, are to be explicitly and separately shown in the bid.

3. Eligibility:

The firm must have the requisite domain expertise with regard to supply, installation and post-sale service of the items they are quoting. The firm should have been in existence for at least six years as on the date of this Tender and must have executed at least three orders for this kind of Equipment) during the last three years.

4. Duty Exemption

The University has been granted the benefit of exemption from the payment of the Central Excise Duty and Customs Duty by the Department of Scientific and Industrial Re-search (DSIR), India, vide their Notification No.10/97, dated 01-03-1997 and No.51/96 dated 23.07.96 respectively, in respect of

a) Scientific and technical instruments, apparatus, equipment, Software including computers.
b) Accessories and spare parts of goods specified in (a) above and consumables.
c) Computer software, compact disks, CD ROM, Recording magnetic tapes, microfilms, micro-chips etc.
d) Prototypes.

Customs duties at Indian port, if any, will be to the account of the University.

5. Technical Specifications

i. **WARRANTY:** The Equipment covered under the purchase order, when installed, shall be warranted for the quality, workmanship, trouble free operation and performance for a period of at least 36 months **(preferably 3 years)** from the date of putting the system into operation at the Department of Biotechnology, Pondicherry University, or at least 42 months from the date of receipt of the last lot of the consignment.
ii. If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including shipping cost both ways.
iii. Complete technical specifications of the Equipment including the Operating system to be included in the bid.
iv. The necessary service support should be provided by Bidder during the agreement period.
v. The training should be provided by the supplying companies.
vi. Operating Manual should be provided in English.
vii. A recent customer list (within last five years) with contact details including email address is to be submitted with technical bids / bids as the case may be.

viii. If the Equipment is proprietary a product, a proprietary product certificate should be enclosed.
ix. The Equipment must operate at 230V / 50 Hz single phase and / or equivalent three phase electrical power.
x. **The validity of the each quotation should be at least for THREE MONTHS from closing date.**
xi. The offers will not be considered if received after the bid closing date and time.
xii. The offers received through telex / telefax / e-mail will not be accepted by the University under any circumstances.
xiii. The University shall not be responsible for any delay / loss or non-receipt of the tender by post / courier service.
xiv. No unsolicited correspondence shall be entertained after the submission of the offer.
xv. If an order is placed with the firm, the purchase shall be governed by an agreement as per the University rules in force at the time.
xvi. Additional terms and conditions will be incorporated in the purchase order, if needed, to safe guard the interests of the University.
xvii. Tender is not transferable.
xviii. In case of any dispute in respect of the Tender, all legal matters shall be instituted within the jurisdiction of the place where the purchaser ordinarily resides.

6. Power to reject the offer:

i. Pondicherry University reserves the right to accept / reject any offer in full or in part or accept any offer other than the lowest offer without assigning any reason thereof. Any offer containing incorrect and incomplete information shall be liable for rejection.
ii. No Agency commission will be paid to any authorized agent in India.
iii. Liquidated damages: Timely supply of the ordered items, installation, commissioning (wherever is applicable) and training etc. is the essence of the contract. In case of failure to supply within the time specified in the Purchase order, a penalty / LD of 0.5% of the total value per week or a part thereof shall be levied subject to a maximum of 7.5% in respect of items which are not supplied. The decision of Pondicherry University shall be final in this regard.
iv. Bidder(s) must be authorized business partners of Global / National service providers of the respective Equipment.
v. The Bidders must enclose authorization letter from the respective global / national service providers of the above said Equipment particularly mentioning an undertaking that in case of default by the Bidder, they (Global Service Provider) shall take over all the responsibilities of the Bidder.
vi. The Bidder should not be involved in any Bankruptcy filing for protection from it.

III. Specific Conditions for Imported Equipments

1. Payment of EMD:

The Quotation must be accompanied by EMD as stated above, by means of a Demand Draft, drawn in favour of **The Finance Officer, Pondicherry University, payable at Puducherry.** The Small Scale units are exempted from payment of EMD provided they enclose the proof of their exemption Certificate issued by the competent authority.

2. Payments terms:

Normally a payment 90% will be released after the installation & training. However, 100% payment will be released **if the supplier provides Bank Guarantee** towards performance Security for the 10 % of the total cost of the furnace to cover the warranty period. Bank charges in India shall be borne by the purchaser and outside India shall be borne by the contractor / supplier. The offer must be in English. The rates should be indicated both in figures and words against item specified in the given table. It is preferable that the price be quoted in US Dollars or in major foreign currencies.
