

**MAHARSHI DAYANAND UNIVERSITY ROHTAK  
DEPARTMENT OF BIOCHEMISTRY & GENETICS**

**TENDER NOTICE**

Sealed tenders are invited subscribed as “Tender for Equipments” for supply of following instruments alongwith earnest money equal to 2% of the quoted rates on the total amount involved in the shape of Bank Draft in favour of Finance Officer, M.D. University, Rohtak, so as to reach the Head Department of Biochemistry & Genetics **on or before 25.02.09**.

The tenders will be **opened 26.02.09 at 11.30 a.m.** in the office of the undersigned. Interested suppliers may have the list of items, detailed specifications and Terms & Conditions from the Department on any working day **upto 5.00 p.m.** or from university website [www.mdurohtak.com](http://www.mdurohtak.com)

**1 REAL TIME PCR SYSTEM SPECIFICATIONS (One)**

1. System for both real-time CR and post-PCR (end-point) analysis using in-built Peltier an automated integrated based PCR Pmachine.
2. System should support applications including absolute quantization, Relative quantization, multiplex- The normalization of reaction due to non-PCR related fluctuations should be possible by using any calibrated dye.
3. .PCR, allelic discrimination (SNP), melt curve analysis as well as pathogen detection and plus/minus using internal positive control.
4. The excitation source should be LED and the detection system should be photodiode.
5. The system should do multiplexing for at least 3 colour and should have 48 Standard wells.
6. The hardware must provide Peltier thermal cycling for Fast-PCR as well as -PCR run in the same block.
7. The System should have temperature range of 4 °C-100°C with peak block ramp rate for heating as well as cooling exceeding 4.5°C/second.
8. System should support reaction volume 10-30 µL and universal thermal cycling conditions to eliminate optimization of PCR conditions for running the templates from different sources simultaneously.
9. The system should support micro well plates, individual tubes and 8-tube strips.
10. The system should provide Touch Screen LCD feature to avoid dependency on computer for operation. However, it should be possible to use computer for system control, operation, analysis, net-working of multiple system and a USB port for data export to Power point, Excel for JPEG file formats.
11. The Dynamic range should be 9 logs of linear dynamic range. The data collection and instrument control software should provide multi componenting algorithm for deconvolution of multiple dyes, and a dedicated licensed full version software for primer and probe design must be included in the supply.
12. .System should be standardized for Taqman and SYBR Green Chemistry with pre-validated and functionally tested Taqman Gene Expression Assays as well as Taqman SNP Genotyping Assays. They should be readily available from the same vendor.
13. The quoted system must have full license for PCR process. A copy of the license may be attached to the offer.
14. The compliance statement of specifications offered by the quoted model vis-à-vis tender specifications must be submitted with the deviations clearly marked and mentioned towards its non-compliance. This statement must be signed, with the company seal, by the Tenderer for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification of the Tender.

**2. Specification for Nucleic acid extraction and sample preparation System (One)**

Instrument for the extraction of nucleic acids from biological samples (Plant sample, Bacterial sample, Blood sample, Animal sample), should be capable of handling up to maximum 24 samples per run. DNA Extraction and purification of excellent purities as shown by OD 260/OD280 ratio. Extracted DNA capable of PCR use. Instrument should be compatible with magnetic beads/magnetic silica based sample preparation kits and preloaded with automated programs for isolation kits. The vendor should provide training on use of equipment and be able to provide kits and reagents for use with the instrument..

### **3. Specification for PCRs (Two)**

11. 48 well block for 48×0.2 ml reaction tubes or 48 well reaction plate.
12. Sample volume range should be 5-100ul range.
13. Temperature can be displayed and set to 0.1°C steps.
14. Should have application support for all PCR applications.
15. Display 7×40 character back-lit graphical LCD display.
16. Auto restarts facility should be there to allow for power outage and safe continuation of a PCR experiments after resumption of power.
17. Should have programmed methods for hot start PCR, Cycle sequencing, long PCR, Touch down PCR.
18. The instrument must have one serial port for connecting to a printer or personal computer.

### **4. Trinocular Research Microscope with photomicrographic attachment:- (One)**

With Automatic and manual karyotyping Software, able to karyotyping of animal and plant chromosomes, ability to work with G,Q,R bandings, ability to added images and image Enhancement, automatic separation of over lapped and adjoining chromosomes, ability to built Customizable ideograms.

### **5. Micro Balances - (Two):-**

Readability: 10 mcg, Automatic Calibration, RS 232 data Interface, Monolithic weigh Cell, ISO/GLP Compliant Printing Capacity, ISO 9001 Certified.

### **6. Semi Micro Balances - (Four)**

Readability : 0.1mg., Automatic Calibration, RS 232 data Interface, ISO/GLP Compliant Printing Capacity, ISO 9001 Certified.

### **7. Non-Refrigerated Micro Centrifuge - (One)**

Micorprocessor controller for speed and time, Brushless induction Driver Motor; LCD Display with compatible Rotors.

Force- 21,000g., RPM up to - 20000

Time set range: 1 to 99 min, 1 min increments

Noise : ≤ 56dBA in minimum speed

### **8. Refrigerated Micro Centrifuge - (Four)**

Micorprocessor controller for speed and time, Brushless induction Driver Motor; LCD Display with compatible Rotors and centrifuge tubes.

Force- 21,000g., RPM up to - 20000

Time set range: 1 to 99 min, 1 min increments

Noise : ≤ 56dBA in minimum speed.

### **9. Injection System to analysis metabolic rate in Drosophila:- (One)**

Carbon dioxide Analyser Resolution better than 0.001% CO<sub>2</sub> , SS3 gas analyzer, expedata data acquisition and analysis software- standard version, accessory kit for respirometry with tubing, tubing connectors, gas scrubbers, cables, customized for injection system.

### **10. Image Analysis Software :- (One)**

Latest Version, Image capture, processing, enhancement and filtering of insects.

Memory Management, 3D Imaging tools, spatial and intensity calibration with adaptor for SZ-11 Olympus Stereo Zoom Microscope.

### **11. Digital Camera with Adapter: (Two)**

For microscopic work, high performance 8 -12 mega pixal.

### **12. Constant Temperature and Humidity Chambers With a surge Tank of 100-150 Litres & Compatible Voltage stabilizer : (One)**

Temp. Range : 10°C to 60°C, Temperature Accuracy : ±0.5°C, Humidity Range : 45 to 95%RH  
Humidity Accuracy: ± 3% of 5%, Control: Digital, Capacity :12 cu ft.: Manufacturing: Inner & Outer chamber made of Stainless Steel.

### **12. CO<sub>2</sub> Incubator( with CO<sub>2</sub> Cylinder): (One)**

With combination of an infrared CO<sub>2</sub> Sensor and PID; Recovery time: ±3 minutes, Humidifying pan; Programmable decontamination with Continuous; UV Sterilization; 5 shelves; 3 Microbial filters; FDA: 510(k) clearance; Interior volume: 195 L; Temp. Range: 5°C ambient temperature to 50°C; Temperature Uniformity: ± 0.25°C top to bottom; Temp. Controllability: ± 0.1°C; Chamber Humidity: 95±5% RH; CO<sub>2</sub> Range 0 to 20 %; CO<sub>2</sub> controllability ±15%; walles and shelves: Copper stainless steel alloy.

TERMS AND CONDITIONS GOVERNING THE TENDERS FOR THE SUPPLY OF EQUIPMENTS/  
INSTRUMENTS.

1. Every tender shall be accompanied by the earnest money equal to 2% of the involved value. The earnest money should be deposited through Bank Draft in favour of the Finance Officer, M. D. Rohtak, payable at the State Bank of India, Maharshi Dayanand University, Rohtak.
2. The tender received without earnest money or after the due date shall not be entertained except with the special approval of the competent authorities.
3. The supplies shall be executed within the time specified in the supply order which may be extended by the Registrar on other application of the supplier explaining reasons/circumstances due to which time limit could not be adhered to. In the event of the supplier failing to supply the material within time, he shall be liable to pay as compensation an amount equal to one percent or such small amount as the Registrar may decide on the said amount of the contract, for every day that the quantity remains incomplete, provided that the entire amount of compensation shall not exceed 10 percent of the total amount of the contract. An appeal against these orders shall however lie with the Vice-Chancellor whose decision shall be final.
4. In case the contractor backs out of his contract, the earnest money deposited by him shall be forfeited besides any other action as may be considered necessary by the Vice-Chancellor.
5. All the charges including packing, forwarding and installation, taxes and other levies should be specified in the tender. The charges etc. not specified in the tender shall not be paid.
6. The quantity of material/supplies shall be subject to increase or decrease on the tendered rates. This increase or decrease shall be communicated by the University within 30 days of acceptance of the tender.
7. Supplies shall be made as per the schedule and within such time as is indicated in the supply order.
8. 100% payment will be made on receipt and inspection of goods to ensure the specifications and their good condition.
9. The rates accepted by the University shall be applicable up to 120 days and the supplier shall have to make supply during the period as and when required.
10. The tenders shall be opened by the Purchase Committee on **26.02.09 at 11.30 a.m.** in the presence of contractor/supplier and the Committee reserves the right for negotiation thereafter if considered necessary.
11. The Registrar reserves the right to reject or accept any offer without assigning any reasons.
12. All disputes subject to Rohtak jurisdiction.
13. Guarantee / warranty of items must be mentioned.
14. **The University stands exempted from the payment of Central Excise Duty/Custom Duty. The rates be quoted keeping that fact in view. Necessary certificate will be provided by the University.**
15. No tender documents will be issued and rates are to be offered on company's letter head.
16. If holiday occurs on the opening day, the tenders will be opened on the next working day.
17. The tenders not received in proper sealed cover shall not be considered and will be liable for rejection in a straightway.
18. **Rates for each item are to be quoted in a separate letter head and are to be sent in a separate cover**

**Head**  
**Department of Biochemistry & Genetics**  
**M.D. University, Rohtak**