

20-08-2016



राष्ट्रीय केला अनुसंधान केन्द्र
(भारतीय कृषि अनुसंधान परिषद)
थोगामलै रोड, थायनुर पोस्ट,
तिरुचिरापल्लि. - ६२० १०२. तमिलनाडु

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F.No.25(1)/2016-SP/ 842 - 856

Dated : 04.08.2016

To

Sir/s,

Quotations are invited by the Director, ICAR - NRC for Banana, Trichy, for supply of the following items as per the specifications furnished in Annexure – "A"

Sl. No.	Name of the article	Qty. Reqd.
1.	Thermal Cycler (as per specifications enclosed)	1 No.
2.	Double Deck Orbital Shaker	1no.
3.	Temperature control Orbit Shaker	1no.

1. Quotations should be inclusive of all packing, forwarding, Insurance, freight etc. Quotations exclusive of packing and freight charges etc. should indicate the amount that shall be charged on this account.
2. Complete descriptions, specifications and make of the goods should be given in the quotations. Necessary literature and pamphlets if any also be sent along with the quotation. Rate per unit should also be given precisely and delivery period clearly mentioned.
3. **THE FIRM SHOULD INVARIABLY QUOTE THE TIN, CST NO. ETC. ON THE BODY OF THE LETTERHEAD IN WHICH THE QUOTATION IS SENT, IF NOT QUOTATION WILL BE REJECTED.**
4. The quotation should be F.O.R. destination and should be kept open for 180 days from the date of quotations. Delivery at the Institute premises at NRCB Office Cum Laboratory Building, Near Thayanur Santhai, Thogamalai Road, Tiruchirappalli-620 102; (Tamil Nadu) /NRCB Research Farm Podavur Village, Inampuliyur Post, Via Kuzhumani, Tiruchirapalli-639 103 (Tamil Nadu) is preferable.

Please turn over..... 2

Tel : Director : 0431 - 2618104, Off : 0431 - 2618106, 2618084 Farm : 0431 - 2618301
Fax : 0431 - 2618115 E-mail : directornrcb@gmail.com, nrcbdirector@gmail.com

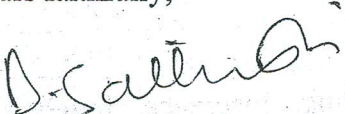
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5. The quotations should be addressed in the name of **"DIRECTOR, NATIONAL RESEARCH CENTRE FOR BANANA, Near Thayanur Santhai, Thayanur Post, Thogamalai Road, Tiruchirapalli - 620 102 (T.N.)"**, and should reach LATEST by **20.08.2016 (SATURDAY) by 12.00 Noon**, in a sealed cover **superscribing "QUOTATIONS FOR SUPPLY OF Thermal Cycler, Double Deck Orbital Shaker and Temnperature Control Orbit Shaker"**.

The right to accept or to reject all or any of the quotation in part or full is reserved.



NOTE : You are requested to send your quotations through "SPEED POST" only and not through "Courier service".

Yours faithfully,


Senior Administrative Officer

Copy to:

1. Chairman (SPAC)
2. The Chairman (PMEC) – for uploading in NRCB Website.
3. The Nodal Officer (CPPP) - for uploading in CPP Portal.
4. PS to Director

①

Temperature controlled ORBIT SHAKER along with flask holding clamps

Speed	50 -350 rpm
Orbital range	20 to 25 mm
Display	LED/touch screen
Cabinet	Steel
Illumination	LED lights
Flask holding clamps	100 ml -35 numbers

- Compact table top
- Accuracy: maximum +/-2% deviation of the set value.
- non geared DC Motor for reduced power consumption with a non deviating amplitude for uniform growth of culture
- RPM Indication: Digital
- Temperature Range: 10° to 70° C with and accuracy of $\pm 0.5^{\circ}\text{C}$ in 10°C and $\pm 0.1^{\circ}\text{C}$ in 37°C to 70°C
- Temperature control should be of PID based microprocessor controller with digital Indication.
- Heater Power: 500 W finned heater
- Temperature control and audio alarm for temperature over / under shoot.
- Temperature control with surge protection
- Universal tray of size 420x420 mm to accommodate 30-35 100 mL flasks
- System should be capable of accommodating 2litre conical flask
- Illumination: field upgradable lower chamber illumination light to be provided
- Option for UV light for decontamination
- Electrical Requirement: 230 V, 15 A, Single Phase, 50 Hz.
- One stationary tray with height adjustable

- ✧ Unit should comply universal standard safety measures of CE certified.
- ✧ Should be ISO 9001- 2015 Certified Company.
- ✧ Manufacturer should be renowned company with a record of minimum 50 Number of installations in India. Complete user list of model quoted with contact details such as email & mobile numbers preferably with the name of the end user should be enclosed with quotation.
- ✧ Related published document, web links and list of publication in support of your claims on shakers supplied/manufactured by you.

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Technical Specifications for Thermal Cycler machine

- System should have 3 to 5 Blocks facilitating multiple researchers to use the same instrument independently at the same time
- Should be able to fit universal PCR tubes (0.2 mL)
- PCR Instrument should be Wi-Fi enabled and remotely connected.
- System must have six separate Peltier Blocks, one can precisely set and control the temperature in each block.
- System should run up to 6 separate temperatures in the same plate with user defined time to determine the optimal annealing temperature.
- Maximum Sample Rate should be 4.50 degree C/sec.
- System must have temperature accuracy of plus or minus 0.25 degree C.
- The system should support block temperature ranges starting from 0°C to 100°C.
- Instrument Memory-USB on Board
- System should be upgradable with 3x32 / 1x96 / 2x96 / 1x384 blocks in future for further progress.

(3)

SPECIFICATIONS FOR PILOT ORBITAL SHAKER

Number of trays	2 (double deck)
Display	LED/touch screen
Cabinet	Steel
Illumination	LED lights for top and bottom tier

- Open type double deck tier shaker
- Speed range : 50 – 200 RPM with maximum accuracy
- Drive: AC Motor with variable frequency drive
- Shaker must have movement incorporated by penta – eccentric counterbalanced drive mechanism for uniform agitation with 50 mm – 60mm orbital dia for growth culture.
- Display : Digital with touch screen
- Universal platform of size 1000 x 1000 mm
- Maximum capacity for accommodating 80 to 90 Nos of 100 ml (or) 80 to 90 Nos of 250ml (or) 50 to 60 nos of 500ml (or) 30 nos of 1000ml (or) 20 nos of 2000ml for each tray
- Bottom tire should be fixed with sticky mat for flask holding
- MOC should be of powder coated steel with anti-vibration mount for smooth running.
- Electrical requirement: 230V, 6Amps, 50Hz
- Audio and visual alarm, Power-off recovery function
- Unit should comply universal standard safety measures of CE certified.
- Should be ISO 9001- 2015 Certified Company.
- Manufacturer should be renowned company with a record of minimum 50 Number of installations in India. Complete user list of model quoted with contact details such as email & mobile numbers preferably with the name of the end user should be enclosed with quotation.
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ims on shakers supplied/manufactured by you.

Flask holding clamps	100 ml – 45 numbers, 250 ml - 45 numbers, 500ml -5 numbers, 1000,2000 ml – each 2 numbers
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