DEPARTMENT OF BIOTECHNOLOGY
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MUKESH DOBLE
Professor and Head

Date: 23.10.2013

Ref: BT/RAMS/2013/43/SPL Dt. 23.10.13 Due Dt.14.11.13

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.

2. The quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.

3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.

4. If the item is under DGS & D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).

5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for should be submitted free of charges and collected back at the supplier's expenses.

6. Local Firms: Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.

7. Firms outside Chennai: Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.

8. The rates of Sales/General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales/General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have concessional sales tax applicable to non-government educational institutions run with no profit motive for which a Concession. Sales tax certificates will be issued at the time of final settlement of the bill.**

9. Goods should be supplied carriage paid and insured.

10. Goods shall not be supplied without an official supply order.

11. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

Technical Specification for 96 block Real Time PCR System

1. RT PCR System should be the Real-time amplification for measuring DNA/RNA from purified samples, application included Quantification assays, Qualitative assays, SNP, HRM, Gene Expression, Virtually any published protocol or chemistry can be reproduced.
2. Instrument should standalone operation independent of Computer work station.
3. System should have a prot for USB Drive for uploading and downloading data and programs.
4. Thermal cycling system Peltier-based, Electro formed silver mount 96-well block can accomadates both 96 well PCR plates as well as 8-Tube Strips with clear caps.
5. System should have a temperature accuracy of ±0.2 ºC of programmed temperature range and Temperature Uniformity SD < 0.1 ºC
6. System should have the provision to do the Column Gradient function for the temperature programmable range Maximum 20 ºC gradient range.
7. System should allow Optimum reaction volumes for each application - 5µl to 50µl and ramp rate should be more than 4 ºC
8. on line Cycle by Cycle monitoring with continuous display of readings for Fluorescence, Temperature changes and progression of amplification.
9. System should have the individual well to well excitation and emission is done through 2 pairs of 96 Optical fibre cables, one for excitation and one for collecting emitted light from the each well with any edge effects.
10. High-intensity LED as a Light source and cooled CCD camera for detection.
11. Working Programmable range 37 to 99 ºC, Sensitivity from 1 copy detection and dynamic range of 10 orders of magnitude.
12. compatible with all kind of chemistry Syber green and Hydrolysis probe and compatabile with all kind of kits in market. (should be open system for both reagents & disposable consumables)
13. Four Excitation filters (470/533/577 and 645 nm) and Four Emission filters (514/572/620 and 697 nm) to cover majority of the dyes with cooled CCD camera for signal detection.
14. Multiplexing capacity: true 4 color multiplex analysis without any passive reference dye.
15. Calibration for Detection Dyes : SYBR, FAM, ResoLight dye, VIC, Hex, Yellow555, Red610, Texas Red, and Cy5.
16. System should free on oil coating and passive reference dye
17. System should performs Simultaneous data acquisition for all positions in 10–1000 ms (dynamic mode)
18. Fast run time Runtime < 40 min for 3-step 40 cycles PCR

19. A Colored touch Screen display for smooth operation.
20. Real time PCR software allow the analysis of all type of application like.,
    a. Absolute quantitation
    b. Advanced Relative quantitation
    c. Multiplex-PCR allelic discrimination (SNP)
    d. Tm Calling (Meltcurve Anlysis – Sybr)
    e. Endpoint Genotyping
    f. Qualitative Gene detection
    g. High Resolution Melting curve analysis (HRM) for mutation studies
    h. Pathogen detection and plus/minus assay.
21. Software should compatible with all type of systems win 7, Win XP and MAC
22. RT PCR software should be multi user installation facility and allow the user to design the experiment or plate layout before running or during the run.
23. Separate Probe Designing Software should be supplied along this Real time software.
24. System software should support the remote access for trouble shooting.
25. **Consumables should be supplied along with the RT PCR:** 3 box of 120 nos of 8-tube strips with clear caps, 2 box of 500 reactions for syber green master mix containing UNG to prevent carryover contamination on gene expression analysis.
26. A compatible 2KVA on-line UPS
27. computer work station for analyzing the real time data for the following configuration, Processor Intel Pentium G2030 / Speed 3 GHz / RAM 4GB / Display Size 20 inches / Resolution 1600 x 900 / Panel Type HD LED Display / All-in-One facility / Capacity 500GB / Rotational Speed(RPM) 7200 Hz / wireless Keyboard / Wireless Mouse Wireless Mouse

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