

**Department of Genetics**  
**University of Delhi South Campus**  
**New Delhi – 110021**

**Specification of Real Time PCR System**

**Ref. no. UDSC/Genetics/AD/RT PCR/F/2025-26**

**Dated 30.04.2025**

Quotations are invited through GeM/CPP portal (e-procurement) under 2-bid system for Real Time PCR System with FOR destination price to be quoted in INR for University of Delhi, South Campus. The quote should be inclusive of all taxes and duties for supplying and installation of the item as described below.

1. The system should be an automated & integrated system for both real-time PCR and post-PCR (end-point) analysis with following features:

**Hardware:**

2. The system should be 384-well block system with Peltier based heating & cooling.
3. The excitation source should be LED/Laser and the detection system should be simultaneous and scan-free for all wells CMOS detection.
4. The system should have 5 excitation and 5 emission filters and come along with fixed (scanning free) optics, ensuring robust data.
5. The system should have temperature range of 4°C - 99°C to facilitate all qPCR applications.
6. The system should have peak block ramp rate for 6°C/second or more.
7. System should support reaction volume minimum of 5 – 20 µL in 384 well block plate and have 5 color multiplexing in a single reaction well.
8. The system should have robust Touch Screen LCD feature.
9. Fast-PCR in less than 35 minutes should be an integral feature of the system.

**Software:**

10. System should be capable of generating MIQE compliant RDML formatted data and compliant with 21 CFR part 11.
11. The instrument should have software that can analyze multiple perspectives in the Multiple Plots view, with side by side views of all data aspects including the amplification plots, standard curve, multicomponent data plots, and raw data. The system should give heat map of the amplification & analyzed data. Software should have PCR efficiency factor correction for gene quantification.
12. The system should along with software to support applications including absolute quantitation, Relative quantitation, multiplex-PCR, allelic discrimination (SNP), melt curve analysis as well as pathogen detection, plus/minus assay using internal positive control & High Resolution Melting analysis for gene & mutation screening and protein thermal shift.

**Supporting Chemistries and Applications:**



13. The system should be completely open system to support all the Real Time PCR chemistry like TaqMans, SYBR Green, Simple & Hydrolysis Probes, and Molecular Beacons etc.
14. The system should be capable of detecting even 1 copy in a single reaction tube without passive reference dye.
15. System should detect differences in target quantity as small as 1.5-fold in singleplex reactions, and should have 10 logs of linear dynamic range.


### **General Instructions**

1. Premium branded instrument should be provided to ensure the high quality and reliability of experimental outcomes.
2. The system should be provided with 2 KVA UPS with 30 min backup, branded desktop (At least i5 processor with minimum 8GB RAM) for instrument control, operation, data storage, analysis, networking of multiple systems, with USB ports for data export with authentic window-based software package.
3. The quoted system must have full license for PCR process and attach a list of minimum 7-10 installations is to be provided.
4. Details on website & product literature justifying the technical specifications must be provided. The vendor must provide appropriate link/ website detail to verify the technical specifications mentioned in the provided product broacher.
5. The system should come along with 3 years of warranty. Should be supported with remote services, cloud connectivity online monitoring, and external barcode using USB, etc.
6. The supplier should have service center in Delhi/NCR for quick service within 48 to 72 hours
7. Firm MUST provide a compliance statement vis-à-vis specifications in a "tabular form" clearly stating the compliance and giving justification, if any supported by technical literature with clear reference of page number, paragraph, or lines. This statement must be signed, with the company seal, by the Tendered for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification of the Tender.

### **Important information**

1. The quotation should be addressed to the "Professor Amit Dutt, Department of Genetics, University of Delhi South Campus, New Delhi-110021". The quote should be submitted with all terms and conditions and necessary documents latest by end of tender date.
2. Quotations must be submitted in a two-bid-system. The first part, technical bid, should consist of all technical details and supporting documents with terms and conditions. The compliance sheet must be filled by the vender.
3. The second part, financial bid, should contain item-wise pricing of items mentioned in the technical bid. Both the quotation documents/ bids are to be submitted through GeM/ CPP portal of the Government of India only (e-procurement). Hard copies of bid will not be accepted.
4. The successful bidder must provide a performance bank guarantee (PBG) as per rule 171 GFR 2017 totaling 3% of the value of the main machine quote with a validity of 60 days upon completion of the warranty period. The PBG should be in favor of "**The Director, University of Delhi South Campus, New Delh-110021**". PBG must be provided at the time of Installation to avoid delay in payment release.

5. The bidder will have to quote all items together. Partial quotes will not be accepted. For each item, the make, model and technical specifications and quantity must be mentioned clearly. Original brochure must be provided.
6. The purchase committee reserve the right to request the participating vender for demonstration of the all the quoted technical specification/ capabilities of the offered model preferably at University of Delhi South Campus, New Delhi-21, or within the Delhi state. The purchase committee reserves the right to disqualify a participating vender if they fail to demonstrate the quoted technical specification and/or capability of the offered equipment/ model.
7. The quote should be valid for 90 days from the last date of submission of bid.



**Professor Amit Dutt**  
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