

Global Tender Notification
For Procuring and Installation of
96-well block and open array Real-time PCR system



INDIAN INSTITUTE OF
SCIENCE

Department of Biochemistry
Indian Institute of Science
Bangalore – 560012

November 2023

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SECTION 1 – BID SCHEDULE

1	Tender No	
2	Tender Date	22 nd November, 2023
3	Item Description	Supply and Installation of <u>96-well block and open array Real-time PCR system</u>
4	Tender Type	Two Bid System a) Technical Bid (Part-A) b) Commercial Bid (Part-B)
5	Place of Submission and tender opening	Dr. Kesavardana Sannula, Department of Biochemistry, 1 st Floor, Biological Sciences Building, Indian Institute of Science, Bangalore – 560012, India
6	Last Date & Time for submission of tender	13th December 2023, 15:00 hrs
7	Date of opening of technical bids	19 th -20th December 2023
8	For further clarifications	Dr. Kesavardana Sannula Department of Biochemistry, 1 st Floor, Biological Sciences Building, Indian Institute of Science, Bangalore – 560012, India

SECTION 2 – ELIGIBILITY CRITERIA

Prequalification criteria:

- 1. The Bidder's firm should have existence for a minimum of 3 years. (Enclose Company Registration Certificate)**
- 2. The Bidder should have qualified technical service personnel for the instrument(s) based in India.**
- 3. If the Bidder is a local distributor/dealer/Agent, it is mandatory to attach an authorization certificate along with the bid from the original equipment manufacturer.**
- 4. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4**
- 5. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect must be given as per Annexure 3.**

SECTION 3 – TERMS AND CONDITIONS

A) Submission of Tender:

- 1. All documentations in the tender should be in English.**
- 2. Tender should be submitted in two envelopes (two bid system).**
 - a. Technical Bid (Part-A) –**
Technical bid consisting of all technical details, check list for conformance to specifications, format in which the price bid is quoted without the actual prices (suppliers who any indication of prices in the technical bid will be automatically disqualified).
 - b. Commercial Bid (Part-B) –**
Indicating item-wise price for the items mentioned in the technical bid, as per the format of quotation provided in the tender, and other commercial terms and conditions.
- 3. The technical bid and price bid should each be placed in a sealed cover, superscripting on both the envelopes the tender no. and the due date and both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No & Due Date.**
- 4. The SEALED COVER superscripting tender number / due date & should reach Dr. Kesavardana Sannula, Dept. of Biochemistry, Indian Institute of Science, Bangalore – 560012, India on or before due date mentioned in the tender notice. In case due date happens to be holiday the tender will be accepted and opened on the next working day.**

If the quotation cover is not sealed, it will be rejected.

- 5. All communications are to be addressed to Dr. Kesavardana Sannula, Department of Biochemistry, 1st Floor, Biological Sciences Building, Indian Institute of Science, Bangalore– 560012, India.**
- 6. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document (Indian Bidders only).**
- 7. If price is not quoted in Commercial Bid as provided in tender document the bid is liable to be rejected.**
- 8. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.**
- 9. Incomplete bids will be summarily rejected.**

B) Cancellation of Tender:

Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

- a. To accept OR reject lowest tender or any other tender or all the tenders.
- b. To accept any tender in full or in part.
- c. To reject the tender, offer not confirming to the tender terms.

C) Validity of the Offer:

The offer shall be valid 120 Days from the date of opening of the commercial bid.

D) Evaluation of Offer:

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and the decision in this regard shall be binding on the bidders.
4. The award of contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
 - a. Non-submission of complete offers.
 - b. Receipt of bids after due date and time and or by email / fax (unless specified otherwise).
 - c. Receipt of bids in open conditions.
6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall construe that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained.
7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. Lowest bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories for installation, operation, pre-processing and post processing, optional items, recommended spares, warranty, annual maintenance contract.

E) Pre-requisites:

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid.

F) Mode of Shipment and customs clearance:

The consignment/the instrument should be delivered to the Department of Biochemistry, IISc. Necessary documentation for the clearance will be provided.

Warranty and annual maintenance:

The complete system is to be under warranty period of minimum 3 years (year-wise breakup value should be shown in the commercial bid) including free supply of consumables, spare parts and data analysis software from the date of functional installation. If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended. An annual maintenance contract is expected to be provided on completion of warranty period.

I) Purchase Order:

1. The order will be placed on the bidder whose bid is accepted by IISc based on the terms & conditions mentioned in the tender document.
2. The quantity of the items in tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.
3. If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

J) Delivery and Installation:

The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore from the date of receipt of purchase order. The system should be delivered, installed and made functional within 90 days from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and inspection, the date of taking over of entire system by the IISc, Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed.

M) Payment Terms:

The payment will be through a Letter of Credit and milestone of the payment will be determined after the mutual discussions with the successful bidder.

N) Statutory Variation:

Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bangalore.

O) Disputes and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

P) General:

- 1. All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.**
- 2. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.**
- 3. The bidder may visit the installation site before submission of tender, with prior intimation.**
- 4. The commercial bid must include the instrument's price in Indian/Foreign currency CIP/CIF IISc Bangalore basis.**
- 5. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc, Bangalore.**

Section – 4 – Technical Specifications

A.1) Technical Specifications Real Time PCR Machine " 96-well block and open array real-time PCR System" towards the purpose to measure gene expression. It is more sensitive than microarrays in detecting small changes in expression but requires more input RNA and is less adaptable to high throughput studies.

S.No.	Specification	Essential/Desirable
1	The system should run real-time PCR experiments without being attached to a computer. When operated as a stand-alone instrument, the instrument will save at least 1000 run files.	Essential
2	Real-time data traces should be viewed during a run from the thermal cycler base or on software (if a computer is connected to the instrument).	Essential
3	System should include an automated lid that opens, closes, and should apply sealing force to reaction wells. Also, the system's lid or drawer should neither extend beyond the footprint of the system nor require additional operating clearance	Essential
4	System should be able to detect a 1.3-fold change in gene expression.	Essential
5	Thermal gradient for optimization of multiple temperatures in a single assay. Temperature differences of up to 24°C front-to-back can be created.	Essential
6	Peltier-driven thermal cycler with maximum ramping speed of 5°C/sec, with an average ramp rate of 3.3°C/sec.	Essential
7	Should have a thermal block operational range of 4–100°C.	Essential
8	Sample block temperature accuracy is +/-0.2°C of programmed target at 90°C, with a uniformity of +/-0.3°C well-to-well within 10 seconds of arrival at 90°C.	Essential
9	Optical system should allow excitation and detection of up to five fluorescent dyes in a single reaction well. The camera should be factory calibrated for the following fluorophores: FAM/SYBR Green, VIC/HEX/Yellow/JOE/TET, CAL Fluor Gold 540, Cal Fluor Orange 560, ROX, Texas Red, CAL Fluor Red 610, TEX 615, Cy5, Quasar 670, Quasar 705, Cy5.5.	Essential
10	All the mentioned dyes should be factory calibrated without any requirement for frequent calibrations. If regular dye calibration is required, cost of calibration including the consumables should be included in the cost.	Essential
11	New dyes can be calibrated in the machine without any additional hardware or filter changes.	Essential

12	The system does not require internal reference dyes such as ROX for data normalization.	Essential
13	Optics independently should illuminate and detect fluorescence from each well with the same LED/detector pair per channel. The system should have six filtered LEDs for illumination and differentially detects emission using six filtered photodiodes (one for each channel plus FRET).	Essential
14	System should read all 96 wells with all channels within 12 seconds.	Essential
15	System must have fixed optical path, directly over each well, eliminates the need to normalize for positional bias.	Essential
16	Absorption spectra in the 450–684 nm; Emission spectra in the 515–730 nm range.	Essential
17	The system should come with dynamic range of 10 orders of magnitude.	Essential
18	In “SYBR/FAM” scan mode, the system should read all 96 wells within 3 seconds.	Essential
19	One channel should be dedicated for FRET and Protein Thermal Shift (Protein Melt) experiments — illuminate dyes with absorption spectra in the 450–490 nm range and detect dyes with emission spectra in the 560–580 nm range.	Essential
20	System should feature a linear dynamic range of 10 orders of magnitude for detection of input samples.	Essential
21	It should detect one copy of target sequence in human genomic DNA.	Essential
22	Users should be able to run reaction volumes from 1–50 µl (10-50 µl preferably).	Essential
23	Instrument should detect ≤10 fmol of fluorescein.	Essential
24	System should have capability to be integrated with an automation system for hands-free operation. API should be available for use in integration.	Essential
25	System should continue to run and complete a run if the software is stopped or interrupted to prevent run data from being lost in case if there is unintentional interruption of the software. This function is especially valuable for precious or limited samples, whereby all data is not lost for a run that was interrupted.	Essential
26	System should directly connect to a network file storage location through Wi-Fi or ethernet with user credentials and can read and write, given system access rights.	Essential
27	System should connect to cloud platform for remote monitoring, experiment set up, and data analysis.	Essential
28	A single software platform should take care of operations and data analysis.	Essential
29	The software should be license free allowing unrestricted	Essential

	installations and should be MIQE compliant.	
30	Software should be capable of data collection, perform various experiments like gene expression, allelic discrimination, nucleic acid quantification and data analysis like t-Test, one-way ANOVA and be able to generate publication ready bar charts, volcano plots, box & whisker plot & annotate with p values. 18. Exported data type and format should be customized.	Essential
31	The software should be set up to email run files to a specified user after runs are completed. And the software should enable data to be grouped and interpreted by both technical replicates and biological groups	Essential
32	Image export options should include DPI selection up to 600DPI, choice of any image size, and color selection using RGB specifications. Image annotation function should allow for automatic p-value annotation and addition of arrows, circles, and text directly onto graph images. *	Essential
33	Software should allow users to combine data from different runs into single analysis.	Essential
34	Multiplex amplification and melt curve and end-point analyses should be performed on up to five fluorophores in a single reaction well and the multiplex data should be displayed for up to five fluorophores.	Essential
35	Multiple plates should be combined into one experiment with the Gene Study Feature and multiple standard curves should be simultaneously viewed when a common fluorophore is used for multiple targets.	Essential
36	Run results should be displayed in a customizable configuration so that multiple panes of information may be viewed in a single window and additional thermal cycler repeat steps should be added to a GOTO loop.	Essential
37	PCR quantification by standard curve features automated calculations of reaction efficiencies with y-intercept. Automated allelic discrimination should use end-point fluorescence or quantification cycle (Cq) values.	Essential
38	If reaction efficiencies are present, these will be automatically utilized in gene expression analysis. Up to 5,000 Cq values from different data files should be compared for gene expression analysis and reference Gene Selector Tool should display gene stability for selection of ideal reference genes.	Essential
39	Gene expression analysis should be performed by relative quantity (ΔCq) or normalized expression ($\Delta\Delta Cq$). Multiple reference genes should be assigned in normalized expression ($\Delta\Delta Cq$) analysis and individual reaction efficiencies should be used in normalized expression ($\Delta\Delta Cq$) analysis.	Essential
40	Software should have features to enable selection of suitable	Essential

	reference genes through gene stability study.	
41	Data graphs and tables should be exported into Microsoft Excel or printed from software directly.	Essential
42	User should be able to generate reports by exporting run information, data tables, graphs, and analysis parameters in a specified order to PDF or other file formats.	Essential
43	Software should enable integration with any laboratory information management system (LIMS) using built-in LIMS file management as well as simultaneously run upto 4 instruments from the same computer.	Essential
44	The software should have the option to be upgraded to 21CFR part 11 compliant version.	Essential
45	Vendor should have more than 100 installations of the rt-pcr instruments in the country. User list and reference letters must be attached.	Essential
46	The specifications should be authenticated by brochures and company website/catalogue. Technical catalogue or brochure of the model must be provided.	Essential
47	If the need be, the qualifying bidders may be required to place the demo model of the quoted equipment in the Department for testing the efficiency of the equipment. Based on the efficiency and the results obtained the technical committee may further disqualify the vendors and shortlist the vendors whose financial bid will then be opened.	Essential
48	System must cover onsite comprehensive warranty for at least 3-5 years from the date of installation	Essential
49.	A startup pack of RT-PCR reagents and accessories necessary to initiate the usage of the instrument and perform the RT-PCR runs must be provided.	Essential

A.1.1) Computer and Monitor:

S.No.	Specification	Essential/Desirable Essential
1	Suitable computer and UPS should be supplied with the instrument (preferably with 8-16GB RAM/1TB hard disk, keyboard, mouse, windows 10 professional operating system and intel core processor).	Essential

A) Training and demonstration:

Training on usage of the machine (hardware and software) must be demonstrated by the successful bidder at bidder's cost to the end users at IISc, Bangalore.

Section 5: Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

**Dr.Kesavardana Sannula
Department of Biochemistry
1st Floor, Biological Sciences Building
Indian Institute of Science
Bangalore – 560012, India**

Annexure-1:

Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

SI No	Name of the Bidder	
1	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
2	Registration No/ Trade License, (attach attested copy)	
3	Registered Office Address	
4	Address for communication	
5	Contact person- Name and Designation	
6	Telephone No	
7	Email ID	
	Website	
8	PAN No. (attach copy)	
9	GST No. (attach copy)	

Signature of the Bidder

Name

Designation, Seal

Date:

Annexure-2:

Declaration regarding experience

To,

**Dr. Kesavardana Sannula,
Department of Biochemistry,
1st Floor, Biological Sciences Building,
Indian Institute of Science
Bangalore – 560012, India**

Ref: Tender No: XXXXXXXXX

Dated: XXXXX

Supply and installation

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has ---- years of experience in supply and installation of Real-Time PCR Machine.

(Signature of the Bidder)

Printed Name

Designation, Seal

Date:

Annexure-3:

Declaration regarding track record

To,

**Dr. Kesavardana Sannula,
Department of Biochemistry,
1st Floor, Biological Sciences Building,
Indian Institute of Science
Bangalore – 560012, India**

Ref: Tender No: XXXXXXXX

Dated: XXXXX

Supply and installation of Real Time PCR Machine

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

Sl.No.	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long
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(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully

(Signature of the Bidder)

Name

Designation, Seal

Date:

Annexure – 4:

Declaration for acceptance of terms and conditions

To,

**Dr. Kesavardana Sannula,
Department of Biochemistry,
1st Floor, Biological Sciences Building,
Indian Institute of Science
Bangalore – 560012, India**

Ref: Tender No: XXXXXX

Dated: XXXX

Supply and installation of Real Time PCR Machine

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above-referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation, Seal

Date:

Annexure – 5:

Details of items quoted:

Company Name	
Product Name with HSN Code	
Part / Catalogue number	
Product description / main features	
Detailed technical specifications	
Remarks	

Instructions to bidders:

- 1. Bidder should provide technical specifications of the quoted product/s in detail.**
- 2. Bidder should attach product brochures along with technical bid.**
- 3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.**

Section 6: COMMERCIAL BID

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

SI No	Description	Catalogue Number	Quantity	Unit Price	Sub Total
1	Instrument price should be line item wise				
2	Accessories for operation and installation				
3	All Consumables, spares and software to be supplied locally				
4	Warranty (3-5 years)				
5	Cost of Insurance and Airfreight				
6	CIP/CIF IISc, Bengaluru				

SI No	Description	Quantity	Unit Price	GST	Total

Addressed to:

**Dr. Kesavardana Sannula
Department of Biochemistry,
1st Floor, Biological Sciences Building,
Indian Institute of Science
Bangalore – 560012, India**

SECTION 7 – CHECK LIST

(This should be enclosed with technical bid- Part A)

The following items must be checked before the Bid is submitted:

1. Envelope “A”: Technical Bid

a) Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:

Annexure 1: Bidders details

Annexure 2: Declaration regarding experience

Annexure 3: Declaration regarding clean track record

Annexure 4: Declaration for acceptance of terms and conditions

Annexure 5: Details of items quoted.

b) Copy of this tender document duly signed by the authorized signatory on every page and sealed.

2. Envelop “B”: Commercial Bid

Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No. & Due Date.