Date:01.10.2024

REVISED SPECIFICATION FOR REAL-TIME PCR

1. Instrument Type

- Real –Time PCR system capable of qualitative and quantitative detection of nucleic acids and discovery of genetic variations. The equipment should be with inbuilt stand-alone analysis capabilities for pathogen quantification, SNP genotyping, Gene expression studies, Plus/Minus Assays that utilize internal positive control, Dissociation Curve Analysis and Multiplexing and complete End-point Assays
- At least 5 excitation and 5 emission channels. Each filter should correspond to one color that ensures smooth differentiation of dyes having high degree of spectral overlap. Excitation-Emission range: 450-730nm with capacity to detect 5 or more different fluorescent reporters in the Same tube.
- System should be pre-calibrated for detecting FAM/SYBR® Green I,VIC/Hex/Yellow/JOE,TET, ROXTM, TexaS Red, CAL Flour Red 610, TEX 615, CY5, CY 5.5, Quasar 670, Quasar 705) and capable of calibration for new dye without hardware and filter change
- System should come with factory calibrated optics, hence there is no periodic calibration is required
- System should be able to connect data for all filters for all wells regardless of place setup.
- Open system capable of running various chemistries so that different chemistries using TaqMan, Molecular Beacon, SYBR green etc can be performed.
- Sensitivity of the system demonstrated down to 1 copy of a target quantity in a reaction.
- Should have multiple scan modes with a FAST scan option for reading all wells in 5 seconds.
- Should be able to run automatic allelic discrimination by end point fluorescence or threshold for up to 5 fluorophores.
- Should have capacity to run Melt curve analysis with high resolution melting as optional feature.
- The amplification traces should be viewed on the LCD screen in real time while a run is in progress with touch screen facility.
- System should have own system memory storage function for at least 1000 runs or more.
- The system Software should be capable of data collection, perform data analysis like T-Test, one-way ANOVA in few clicks.

2. Key Features

- **Temperature range**: 4-100°C; Accuracy: ±0.2; Uniformity:±0.3 well to well after 10 sec of arrival target.
- **Gradient:** Operational range:30-100°C; Programmable span:1-24°C
- Built- in emission filters to support a broader range of fluorophores, especially longer wavelength(red) dyes.

3. Reaction volume

- Minimum 10 μLto a maximum of 100μL
- Sample capacity wells: 96
- Licensed Version of Application software and lifetime free/ upgradation for primer and probe design and relative quantitation analysis.

4. Installation and Calibration

- Startup kits for onsite training after installation must be provided
- Consumables for setting up of 1000 samples and 100 preps for the DNA isolation kit must be provided.

5. Computer and Accessories:

• Latest laptop (i7 & 16GB RAM) is provided with UPS and printer

6. Others

- Training must be provided
- Lifetime warranty on LED light source
- Quoted make having a minimum installation of 5 or more in a Govt/private and Universities.
- Manufactures should have service facility in the region
- System should come with 3 years as a standard warranty

OTHER TERMS & CONDITIONS

- The cost of the equipment should include Transportation, Installation, commissioning, cartage, etc. for delivery of the material at CIFT, Willington Island, Kochi and for Training of staff, if required.
- The equipment offering shall be incompliance to the specifications mentioned above and shall be of the latest technology, best quality and high standards.
- Brand name, Model Number, Technical specifications, etc. should be clearly mentioned and uploaded along with the Brochure of the product quoted.
- Documents such as Brochure, Brand, Make, Model Number, Technical Specification, etc. should be included in the Bid Document
- **Dispute Resolution:** When a dispute/difference arises between the procuring entity and supplier, both the purchaser and supplier should first try to resolve it amicably by mutual consultation. If the parties fail to resolve the dispute within 21 (twenty-one) days, then depending on the position of the case, either the purchase or supplier should give notice to the other party of its intention to commence arbitration. When the contract with a domestic supplier, the applicable arbitration procedure shall be as per the Indian arbitration and conciliation Act 1996. While processing a case for dispute resolution or litigation or arbitration, the procuring entity shall take legal advice, at appropriate stage. **The venue of arbitration should be the place from where the contract has been issued.**
- **Installation**: Within 30 days from the date of receipt of equipment in the Institute failing which liquidated damage clause shall apply.
- **Liquidated Damage Clause**: It would be realized @ 0.5% (half percent) of the base price (excluding taxes) of delayed goods for each week of delay subject to maximum 10%.
- **Integrity pact:** The integrity Pact essentially envisages an agreement between the prospective vendors/bidders and the buyer, committing the persons/officials of both sides, not to resort to any corrupt practices in any aspects/stages of the contract. Only those vendors/bidders, who commit to such a pact with the buyer, would be considered competent to participate in the bidding process. The essential ingredients of the pact include:
 - i) Promise on the part of procuring entity to treat all the bidders with equity and reason and not to seek or accept any benefit, which is legally available.
 - ii) Promise on the part of bidders not to offer any benefit to the employees of the Procuring Entity not available legally and also not to commit any offence under Prevention of Corruption Act, 1988 or Indian Penal Code 1860.
 - iii) Promise on the part of bidders not to enter into any undisclosed agreement or understanding with other bidders with respect to prices, specifications, certifications, subsidiary contracts etc.
 - iv) Undertaking (as part of fall clause) by the bidders that they have not and will not sell the same material/equipment at prices lower than the bid price.
 - v) Foreign bidders to disclose the name and address of agents and representatives in India and Indian Bidders to disclose their foreign principals or associates.
- The Director, CIFT, Cochin reserves the right to accept or reject any Bid and to cancel the Bidding processes or reject all Bids at any time prior to the award of Contract without hereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected. Bidder or Bidders of the ground for Institute's action.
- Proper servicing, whenever necessary, has to be provided by the supplier or their authorized agents. Availability of technical support & servicing facility locally/nationally should be indicated.