CSIR- CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE
MYSURU-570 020, INDIA

(Constituent Laboratory of CSIR, New Delhi (Ministry of Science & Technology)
An ISO 9001:2008, ISO 14001:2004 & ISO 17025:2005, NABL Accredited Laboratory

CORRIGENDUM

Tender Ref: CFTRI/52363/25-26 **Date: 14-11-2025**

Tender ID: 2025_CSIR_252862_1

The revised and final specifications for supply of **Real Time Polymer Chain Reaction (RT-PCR)** based on the deliberations in Pre Bid Conference held on 03-11-2025 @ 11.00 A.M, is uploaded herewith. All the prospective bidders are requested to take cognizance of the revised specifications and submit their bids accordingly on or before the extended bid submission date i.e., 04-12-2025 (03:00 pm)

All other terms and conditions of tender enquiry document remain unaltered.

Controller of Stores & Purchase
CSIR-CFTRI, Mysore
Dt. 14-11-2025

Specifications for Real Time PCR (RT-PCR)

Real time PCR system is intended for wide range of molecular biology applications including analysis of gene expression, miRNA profiling, SNP genotyping, protein thermal shift analysis and pathogen detection in GMO samples and food products. These systems shall provide both absolute quantification and relative quantification capabilities with high sensitivity, specificity and accuracy. A precise quantification of nucleic acids for gene expression studies, track genetic variants in SNP genotyping, detect miRNAs for regulatory functions and monitor protein stability through thermal shift assays. Additionally, it is critical for ensuring food safety and compliance by detecting pathogens and genetic modifications in agricultural and food products. With advanced multiplexing capabilities and robust thermal control, real-time PCR systems streamline high throughput workflows while maintaining data integrity, making them invaluable for testing analysis of foods. Detailed specifications are given below.

S.No	**General Specifications**	
1	Detection channels	5 colour Fluorescence
2	Chemistry (dye) compatibility	system is pre-calibrated for detecting FAM, SYBR Green, Taq Man, Eva Green, JOE, HEX, VIC, ROX, Texas Red, Cy5, Alexa Fluor 647, Cy5.5, Quasar 705 and additional dyes falling within the instrument LED Range without hardware and filter change
3	Sample through put	96 wells
4	Software	System should provide 03 or more user licenses for full version software for variety of analysis applications including absolute quantification, relative quantification, allelic discrimination, melt curve and automatic statistical analysis. Simultaneous viewing of amplification plot & QC summary should be possible to easily identify & eliminate outliers.
	Thermal Cycling Specifications	
5	Sample Capacity	System should come with 0.2 mL block for use with 96-well plates, individual tubes or strips for volumes ranging 1 -50 ul or more
7	Operating temperature	Temperature Range: 4 – 99°C
8	Max block ramp rate	96-well 0.2mL block: average 5°C/sec or better
9	Average sample ramp rate	Average sample Ramp rate: 5°C/sec or better
10	Thermal uniformity	Temperature uniformity of ± 0.25°C or better
11	Temperature Accuracy	accuracy ± 0.2°C or better
12	Heating /Cooling method	Peltier based cooling & heating for uniform temp control across the samples
13	Temperature Zone function	96 wells automated linear gradient temperature system
14	PCR run time	Standard and fast mode
	Optimal System Specifications	
15	Detection method excitation source	Five dedicated LED lights for excitation on shuttle based optics

16	Excitation wavelength range	450 nm to 650 nm
17	Emission wavelength range	515 nm -730 nm
18	Multiplexing capacity	True 5 or more Colour Multiplexing with use of 5 or more different fluorophores
19	Optical filter system	System should have minimum five excitations and five emission channels capability. Each filter corresponds to one colour that ensures smooth differentiation of dyes having high degree of spectral overlap.
20	Sensitivity	Detect differences as small as 1.5 fold in target quantities in singleplex reaction
	Data Analysis and connectivity	
21	PC /Desktop	Branded DELL/HP or equivalent, compatible with software (1 TB SSD I7 process 14th generation 14700 processor,16 GB, DD5 RAM, 17 inch full HD LED monitor). Wi-Fi/bluetooth/ ether net and USB
22	Data export	Export multiple formats (Excel, PDF)
23	21 CFR part 11 compliance	System should have 21 CFR part 11 compliance. Five or more user license.
24	Interface	PC based software with remote control with compatible automated workflows through PC and Touch screen
25	Calibration	System should be free of optical and thermal calibration And yearly once calibration for next 05 years should be included in the quotation. Onsite installation and training should be provided. Any software upgradation to be provided free of cost till the system is in operation as per the NABL ISO 17025 requirements
26	Light source/ Warranty	RT-PCR machine warranty should be minimum 03 years including light source
27	Consumables	Minimum 100 number of 96 well plates ,100 sealers. SYBR master mix for 100 reactions. mRNA isolation kit is minimum set of 25 or 50 per kit for 250 reactions, cDNA preparation kit is minimum set of 25 or 50 per kit for 250 reactions with free of cost should be provided along with instrument