

Specifications for Gradient Thermal Cycler (PCR Machine)

Technical Requirements:

- Block format: System should have **2 x 48 well gradient** dual block, interchangeable, capable of accommodating 2 x 48 x 0.2ml tubes/strips thereof or 2 x 48 well plates
- Block should be capable of running minimum 8 different incubation temperatures in a single run independently or as a part of thermocycling protocol.
- Heating ramp rate: $\geq 4^{\circ}\text{C}/\text{sec}$
- Cooling ramp rate : $\geq 3^{\circ}\text{C}/\text{Sec}$
- Operating Temperature $^{\circ}\text{C}$ or range : 10 - 100 better
- Temperature uniformity should be $\pm 0.4^{\circ}\text{C}$ well-to-well within 10sec of arrival at 90°C
- Temperature accuracy of $\pm 0.1^{\circ}\text{C}$ or $\pm 0.2^{\circ}\text{C}$
- Gradient range: $30\text{-}100^{\circ}\text{C}$ with temperature differential range: $1\text{-}24^{\circ}\text{C}$ or better
- Machine display: **LCD display with touch screen**
- System should have dynamic ramping so that all wells reach the designated temperature at the same time
- System should have block and calculated temperature modes along with step based graphical and automatic programming options
- System should have provision for generating automatic protocol based on user defined polymerase, primers and product length
- System should be able to store 1000 typical programs onboard and unlimited with USB flash drive expansion
- System should have provision for optional upgradation to 5 color real time PCR system if required in future
- System should have provision for sending email notifications after run is complete, run reports, data logging, optional log-in, restricted user privilege and secure mode for controlled environments

Validity requirements:

- Comprehensive warranty for 24 months and free AMC for another 12 months.
- We need a well-tested and validated standard equipment and not custom made equipment.
- The equipment should come with a certificate of analysis and conformity.
- The vendor needs to provide the address of certified and authorized service center for the quoted equipment in Mumbai.
- Printed brochure for the standard unit with specifications.
- List of at least 25 Indian Installations and 50 global installations of the quoted instrument and description of the users with details.
- OEM Certificate is required.