

# REAL TIME PCR

## Required Main Features:

Computer based Real time PCR system with suitable software for operation, data analysis etc.

- Peltier based heating and cooling blocks.
- It must be an open system for reagents of any make
- Software for control and analysis
- Volume calibration with the plate used.
- Sub assays with-in single plate to facilitate independent monitoring and analysis ability.
- Data export to excel sheet for further analysis.
- Capable of performing multiplex assays
- Capable of multicolour (4 or 5 colour) detection system.

## Thermo Module:

- Block of 96/384 well block with adjustable ramp
- Block should support 96 x 0.2 ml tubes.
- System should support the reaction volume of up to 100  $\mu$ l.
- Block homogeneity – 20 to 70°C:  $\leq \pm 0.3^\circ\text{C}$  & 95°C:  $\leq \pm 0.4^\circ\text{C}$ .
- Temperature uniformity :  $\pm 0.5^\circ\text{C}$
- Ramp rate: 2.5 degrees/sec or more.
- Control accuracy per well  $\pm 0.2^\circ\text{C}$ .
- Hot start facility.

## Optical Module:

- Should be capable of detection of most fluorescing dyes (SYBR, FAM, VIC, JOE, TET, HEX, TAMRA, ROX etc).
- Detector: PMT/Cooled CCD camera/photodiode for detection of fluorescence
- Dynamic Range:  $> 5$  orders of magnitude
- Sensitivity: Detection up to one copy number or  $\leq 50$  fm fluorescent