Technical specifications for Thermal cycler

- The instrument should have gradient enabled 2 x 48 wells blocks with Peltier based heating and cooling.
- The instrument should have options for using gradient-enabled blocks of 96 well, 96–deep well and 384-well as well.
- The instrument may have feature of optional upgradable to RT-PCR by adding the optical module
- Should have Gradient feature with uniform ramping with a linear gradient with 8 different annealing temperatures or more with a programmable range of 1-24°C.
- Should have intuitive touch screen interface which can displays graphics in high resolution for easy programming.
- The touch screen should be responsive for both gloved and ungloved fingers.
- Should be capable of running reaction volumes from 1-100ul.
- Should have a maximum ramp rate of 5°C/sec with average ramp rate of 3.3°C/sec
- Should have a temperature range of 0-100°C
- Should have a gradient range of 30-100°C
- Thermal gradient span should be 1 – 24°C
- Should have a temperature accuracy and uniformity of ± 0.2°C
- Should work with both high and low profile tubes and plates.
- Should have a memory for >1000 programs with further expansion through a USB Flash drive for transfer of files.
- The software should have exportable Run logs and system error logs
- Should have quick boot up time of not more than 1 min.
- System should have built in library of standard protocols for long PCR, fast PCR, reverse transcription PCR etc.
- Should have the feature of "instant incubation" to keep samples at constant temp for ligation and restriction digests.
- Should have power save mode.
- The instrument may have feature of networking as high as 4 instruments or 32 instruments also using PC.