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THERMAL CYCLER FOR LAB-ON-A-DISC PLATFORM CONTROLLED BY BLUETOOTH MODULE THEREOF



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- #### TECHNOLOGY READINESS LEVEL (TRL)

- TRL 4

PATENT/ GRANTED NUMBER

- UI 2017705113

▶ TECHNOLOGY OVERVIEW

The present invention relates to a device for amplification of a segment of a nucleic acid via the polymerase chain reaction (PCR) on a lab-on-a-disc platform using Bluetooth communication to initiate and monitor incubation process. The device of the present invention comprises a housing, a rotatable microfluidic disciform compact disc for receiving the nucleic acid samples, wherein the rotatable microfluidic disciform compact disc comprises a microchannel and microreaction chamber; a thermal block surrounding the rotatable microfluidic disciform compact disc positioned in the housing for regulating a temperature of the PCR, wherein the thermal

block comprises a heating element, a microfluidic disciform compact disc, a rotatable temperature sensor disciform compact disc and a cooling member; a control circuit comprising a programmable microcontroller in communication with the thermal block for controlling the temperature thereof; and a Bluetooth module connected to the programmable microcontroller for remotely communicating with a Bluetooth enabled computing medium.

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