

16. The microfluidic cartridge of claim 1, wherein the cartridge housing comprises two lateral cover components configured to be coupled together to enclose the fluid-holding reservoir, the microfluidic channel, the printed circuit board, the via, the valve, and the heating element. 5

17. The microfluidic cartridge of claim 1, wherein the outlet is located on an angled bottom of the fluid-holding reservoir at a lowest height of the fluid-holding reservoir.

18. The microfluidic cartridge of claim 1, wherein the phase-changeable material adheres to at least one inner wall of the fluid-holding reservoir. 10

19. The microfluidic cartridge of claim 1, further comprising one or more additional valves each aligned with a respective one or more additional outlets connecting one or more additional reservoirs to the microfluidic channel. 15

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