FLOW CONTROL AND PROCESSING CARTRIDGE

ABSTRACT OF THE DISCLOSURE

A flow control and processing cartridge includes a cartridge body and a reaction chip. The cartridge body includes plural first chambers and plural first channels for storing and processing at least one of a sample, a reagent and a buffer and configured to perform nucleic acid extraction. The reaction chip is in conjunction with the cartridge body and includes plural second chambers and plural second channels configured to store and process an amplification reaction solution, and at least two fluidic networks configured to perform nucleic acid amplification and detection. One of the fluidic networks includes plural detection wells, a main fluid channel connected with the detection wells and configured to dispense the sample or control liquids into the detection wells, and a gas releasing channel connected with the detection wells and configured to release gas from the detection wells, wherein one of the fluidic networks is configured for quality control.

Figure 3