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(54) **Title**: A DETECTOR MODULE, A METHOD FOR CONTROLLING THE DETECTOR MODULE AND A DETECTION SYSTEM

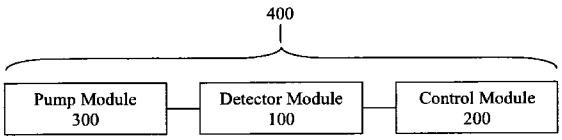


FIG. 4A

(57) **Abstract**: According to embodiments of the present invention, a detector module is provided. The detector module includes: a chip configured to receive at least one specimen; a first light-emitting diode configured to illuminate the at least one specimen; and a first photodetector configured to detect light emitted from the at least one illuminated specimen. According to further embodiments, a detection system is provided. The detection system includes: a detector module; a control module in electrical communication with the detector module; and a pump module configured to collect a sample and transfer the sample to a chip of the detector module.

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