

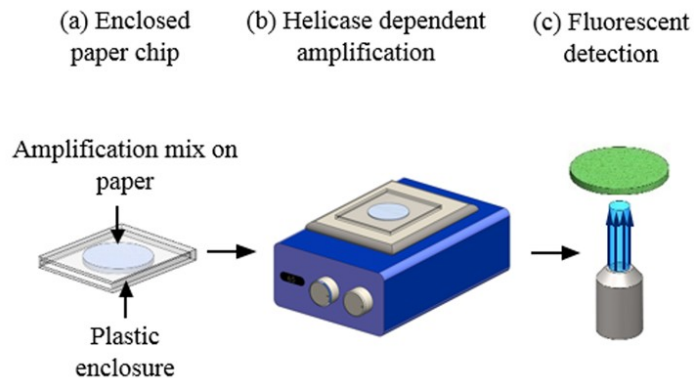
SYSTEMS AND METHODS FOR POINT OF CARE DETECTION AND AMPLIFICATION OF NUCLEIC ACIDS

The present invention provides systems and methods for point of care amplification and detection of solution-state nucleic acid targets in a single device.

It particularly provides isothermal methods for amplifying nucleic acids in the device. It also provides systems and methods for detecting and analyzing nucleic acids in the device.

ADVANTAGES

- Amplification of nucleic acids within paper or paper like cellulosic matrix/substrate.
- Paper as an affordable substrate for amplification making diagnosis economical.
- Minimal reaction mix employed for amplification in a paper matrix/substrate.
- Minimal reaction time for amplification of nucleic acids.
- Any inexpensive heat source, including but not limited to, hot plates, hand warmers, toe warmers, other contact heaters, heaters printed on the back of the device, non contact heaters including but not limited to infrared heat sources, inductive heating, etc. to be used.
- ✚ Detection of the amplified nucleic acid immediately after amplification.
- ✚ Obviates the need for additional sample preparation steps and thereby less manual intervention is required.
- ✚ No refrigeration is required



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