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8. The apparatus of claim 1, wherein the containment vessel, the sample collection element, the nucleic acid binding element, and the plurality of reagents are configured for a single use.

9. The apparatus of claim 1, wherein the heater is configured for a single use.

10. The apparatus of claim 1, further comprising a waste collection unit.

11. The apparatus of claim 10, wherein the waste collection unit is coupled to the sample collection element and comprises:

a chamber, the chamber comprising a first gap; and a plate, the plate coupled with the chamber and comprising a second gap,

wherein the chamber and the plate surround the sample collection element and at least one of the chamber and the plate is configured to be rotatable, and

wherein when the first gap overlaps with the second gap, content of the containment vessel is adapted to flow into the chamber of the waste collection unit.

12. The apparatus of claim 11, wherein the content of the containment vessel adapted to flow into the chamber of the waste collection unit is a waste.

13. The apparatus of claim 5, wherein the plurality of reagents are enveloped within a plurality of reagent cartridges,

wherein the plurality of reagent cartridges each comprises a capsule and a plug, the capsule being connected to the lumen through an opening, the plug sealing the opening; and

wherein the plurality of reagent cartridges are configured to load the plurality of reagents through the lumen for placement in fluid communication with the nucleic acid binding element upon removal of the plug from the opening.

14. The apparatus of claim 1, wherein the nucleic acid amplification reagents are sequestered within separate polymer shells, the polymer shells comprised within the containment vessel and configured to melt and to release the nucleic acid amplification reagents for placement in fluid communication with the nucleic acid binding element when the polymer shells are heated by the heater.

15. The apparatus of claim 14, wherein the polymer shells are polycaprolactone (PCL) shells.

16. The apparatus of claim 1, wherein the sample collection element comprises a bodily sample collection element suitable for collecting a bodily sample selected from the group consisting of nasal mucus, urine, fecal matter, blood, saliva, buccal cells and combinations thereof.

17. The apparatus of claim 16, wherein the bodily sample collection element is a swab.

18. The apparatus of claim 1, wherein the nucleic acid binding element comprises a FTA card.

19. The apparatus of claim 1, wherein the heater is configured to generate heat via an exothermal chemical reaction.

20. The apparatus of claim 19, wherein the heater comprises a phase change material.

21. The apparatus of claim 1, wherein the heater is configured to generate heat via metal oxidation.

22. The apparatus of claim 1, wherein the heater is configured to generate heat using a supersaturated salt solution.

23. The apparatus of claim 1, further comprising a detection element configured to detect amplification of the target nucleic acid.

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24. The apparatus of claim 23, wherein the detection element comprises a colorimetric dye in fluid communication with the nucleic acid amplification reagents, and

wherein the colorimetric dye is configured to undergo a color shift when the target nucleic acid is amplified.

25. The apparatus of claim 24, wherein the colorimetric dye is hydroxynaphthol blue (HNB).

26. The apparatus of claim 23, wherein the detection element comprises a fluorescent dye in fluid communication with the nucleic acid amplification reagents, and

wherein the fluorescent dye is configured to fluoresce when the target nucleic acid is amplified.

27. Apparatus for diagnosing a condition in an individual, the condition being associated with presence of a target nucleic acid in the individual, the target nucleic acid being produced by a pathogen, the apparatus comprising:

a containment vessel being a sealable tube, wherein the containment vessel has a container body defining a single unpartitioned cavity;

a sample collection element configured for removable coupling to the containment vessel and comprising a lumen; a nucleic acid binding element positioned within the containment vessel,

wherein the sample collection element is configured to collect the sample and to transfer the sample to the nucleic acid binding element when the sample collection element is removably coupled to the containment vessel, and

wherein the sample collection element includes a lumen and a swab at one end of the lumen, the lumen being configured to deliver through the swab a fluid to the containment vessel;

a waste collection unit comprising a chamber and a plate, the chamber comprising a first gap, the plate coupled with the chamber and comprising a second gap,

wherein the chamber and the plate surround the lumen and at least one of the chamber and the plate is configured to be rotatable, and

wherein when the first gap overlaps with the second gap, content of the containment vessel is adapted to flow into the waste collection unit;

a plurality of reagents enveloped within a plurality of reagent cartridges, the plurality of reagents comprising nucleic acid purification reagents and nucleic acid amplification reagents, the plurality of reagent cartridges each comprising a capsule and a plug, the capsule connecting to the lumen through an opening, the plug sealing the opening, and

wherein the plurality of reagent cartridges are configured to load the plurality of reagents through the lumen for placement in fluid communication with the nucleic acid binding element upon removal of the plug from the opening; and

a heater configured to heat the nucleic acid amplification reagents when the nucleic acid amplification reagents are in fluid communication with the nucleic acid binding element, the heater being a disposable heater applied on an external surface around the containment vessel.

28. The apparatus of claim 27, wherein the pathogen is selected from the group consisting of viruses, bacteria, fungi, and combinations thereof.

29. The apparatus of claim 27, wherein the condition is an infectious disease.

30. The apparatus of claim 29, wherein the infectious disease is selected from the group consisting of foot and mouth