

9 mm apart from one another, wherein the distance is measured between a centroid of the first PCR tube and a centroid of the second PCR tube.

25. The multi-sample cartridge of claim 22, wherein the first PCR tube and the second PCR tube are attached to a removable strip.

26. A method of converting a sample comprising a number of cells that have one or more polynucleotides into a form suitable for analyzing the one or more polynucleotides, the method comprising:

introducing from about 0.1-2.0 mL of the sample and an excess quantity of air into a bulk lysis chamber;

applying heat to the sample in the bulk lysis chamber, to raise the sample to a first temperature, thereby lysing cells in the sample and producing a lysate containing the one or more polynucleotides;

capturing one or more polynucleotides in the lysate on an affinity matrix;

causing the beads to leave the bulk lysis chamber and be trapped on a filter;

washing the beads with a wash reagent;

displacing the wash reagent with a release buffer;

heating the beads to a second temperature, thereby releasing the one or more polynucleotides; and

causing the one or more polynucleotides to be transferred to a PCR tube.

27. The method of claim 26, wherein prior to applying heat to the sample, the sample is dissolved in one or more lysis reagents in the bulk lysis chamber.

28. The method of claim 26 wherein the affinity matrix comprises one or more beads.

29. The method of claim 26 further comprising, after heating the beads to the second temperature:

combining a neutralization buffer with the one or more polynucleotides to produce one or more neutralized polynucleotides; and

wherein the one or more neutralized polynucleotides are transferred to a PCR tube.

30. The method of claim 26, wherein the first temperature is between about 55 and 65° C.

31. The method of claim 26, wherein the second temperature is about 70-95° C.

32. The method of claim 26 wherein the beads comprise poly-lysine or polyethyleneimine.

33. The method of claim 26 wherein the beads are microspheres.

34. The method of claim 26 wherein the sample is kept at the first temperature for up to about 7 minutes.

35. The method of claim 27, wherein the lysis reagents are in the form of one or more lyophilized pellets.

36. The method of claim 28 wherein the one or more beads are in the form of one or more lyophilized pellets.

37. The method of claim 26 wherein the bulk lysis chamber and the PCR tube are part of a microfluidic component.

38. A method of analyzing a sample comprising a number of cells that have one or more polynucleotides, the method comprising:

converting the sample into a form suitable for analyzing the one or more polynucleotides, using the method of claim 24; and

analyzing the sample, using a method selected from the group consisting of: PCR, TMA, SDA, and NASBA.

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