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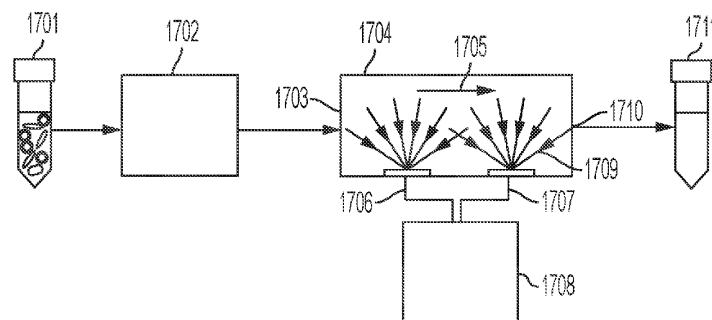


FIG. 17A

(57) Abstract: Methods and apparatus for detecting, quantifying, enriching, and/or separating bacterial species in fluid sample are provided. The fluid sample is provided as input to a microfluidic passage of a microfluidic device, wherein the microfluidic device comprises at least one electrode disposed adjacent to the microfluidic passage. The at least one electrode is activated to capture bacteria in the sample using dielectrophoresis, wherein the capture efficiency of bacteria is at least 99%.



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