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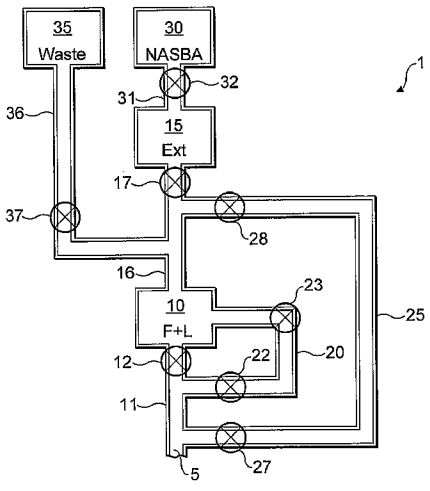
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*[Continued on next page]*

(54) Title: A DIAGNOSTIC SYSTEM FOR CARRYING OUT A NUCLEIC ACID SEQUENCE AMPLIFICATION AND DETECTION PROCESS




(57) Abstract: An integrated lab-on-a-chip diagnostic system for carrying out a sample preparation process on a fluid sample containing cells and/or particles, the system comprising: (a) an inlet for a fluid sample; (b) a lysis unit for lysis of cells and/or particles contained in the fluid sample; (c) a nucleic acid extraction unit for extraction of nucleic acids from the cells and/or particles contained in the fluid sample; (d) a reservoir containing a lysis fluid; (e) a reservoir containing an eluent for removing nucleic acids collected in the nucleic acid extraction unit; wherein the sample inlet is in fluid communication with the lysis unit, an optional valve being present to control the flow of fluid therebetween; wherein the lysis unit is in fluid communication with the nucleic acid extraction unit, an optional valve being present to control the flow of fluid therebetween; wherein the reservoir containing the lysis fluid is in fluid communication with the lysis unit, an optional valve being present to control the flow of fluid therebetween; and wherein the reservoir containing the eluent is in fluid communication with the nucleic acid extraction unit, an optional valve being present to control the flow of fluid therebetween.

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