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(54) Title: REACTION VESSEL FOR PCR DEVICE AND METHOD OF PERFORMING PCR

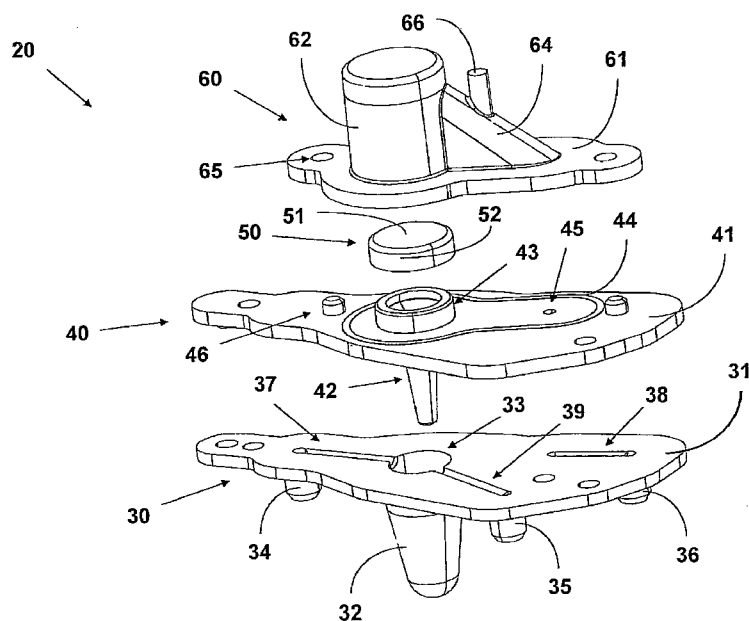


Fig. 2d

(57) Abstract: The present invention provides a reaction vessel (20) for a PCR device. The reaction vessel (20) comprises a sample vial (32) defining a reaction chamber (33) for performing PCR and a storage vessel (62) defining a storage chamber (63) for optical detection. The reaction chamber (33) is in fluid communication with a liquid supply port (34) for supplying a liquid sample containing at least one target DNA to the reaction chamber (33). The reaction chamber (33) and the storage chamber (63) are in fluid communication via a spacer element (42) and a porous membrane (51) for hybridization of the at least one target DNA within the liquid sample onto specific immobilized hybridization probes. The lower end of the spacer element (42) extends into the reaction chamber (33), but does not reach the bottom thereof. The upper end of the spacer element (42) is located in proximity of the porous membrane (51), which is made from a material having different physical properties in a dry state and a wet state. In the dry state the porous membrane (51) allows air as well as liquid to pass therethrough. In the wet state the porous membrane (51) still allows the passage of liquid therethrough, but not of air, such that during a

PCR the liquid sample remains in the reaction chamber (33) and after the PCR the reaction vessel (20) is configured to force the liquid sample via the spacer element (42) to the porous membrane (51) for hybridization and detection of the at least one target DNA in the liquid sample. Moreover, a PCR device comprising such a reaction vessel (20) as well as a method for performing PCR are described.



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