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(54) Title: INTEGRATED APPARATUS FOR CONDUCTING AND MONITORING CHEMICAL REACTIONS

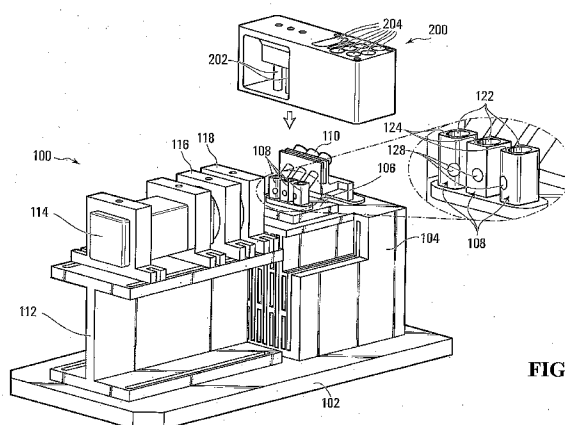


FIG. 1

(57) Abstract: Apparatus for conducting and monitoring chemical reactions comprises a base and a thermal cycler mounted on the base. A plurality of heat-conducting receptacles are mounted on the thermal cycler and in heat-communication therewith. Each receptacle comprises an opaque body defining a bore having an open end, a first window, and a second window. A cartridge is removably mounted on the receptacles. The cartridge comprises a plurality of light-transmitting reaction vessels, and conduits connected to the reaction vessels for processing and transferring fluid. The reaction vessels are received in the bores of the receptacles through the open ends of the bores. A light emitter is mounted on the base for illuminating the reaction vessels through the first windows of the reaction vessels. A light detector is mounted on the base for selectively receiving and detecting light emitted from the reaction vessels through the second windows of the receptacles.

WO 2009/072987 A1



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