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(54) Title: APPARATUS AND METHODS FOR DETECTING DNA IN BIOLOGICAL SAMPLES

(57) Abstract: Apparatus and methods are described for detecting target DNA in a biological sample using capture probes and electrically-assisted hybridization. The reaction cell is formed with an attachment surface of aluminum oxide for better thermal and physical properties, and the aluminum oxide surface is coated with anti-DIG antibody to provide a convenient attachment layer for the capture probes allowing their correct orientation, while the capture probes are formed with a DIG-label so that they attach to the surface of the cell through an anti-DIG/DIG linkage.

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