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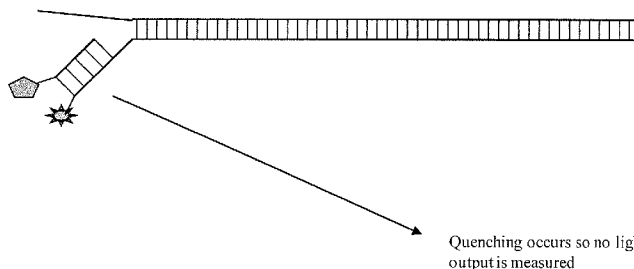
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(54) Title: POLYMERASE CHAIN REACTION DETECTION SYSTEM USING OLIGONUCLEOTIDES COMPRISING A PHOSPHOROTHIOATE GROUP

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Synthesised strand DNA is copied inclusive of primer tail. Reverse strand is also primed and copied from more tailed primer (not shown)



(57) Abstract: The present invention relates to methods and kits for nucleic acid detection in an assay system. In one aspect, the invention relates to a method for reducing non-specific amplification and primer-dimer formation in a primer extension reaction in the presence of a polymerase lacking 3' -5' nuclease activity. In another aspect, the invention relates to a method for the detection of a primer extension product produced in the presence of a polymerase lacking 3'-5' exonuclease activity comprising providing a first and second single-labelled oligonucleotide of differing T_m able to hybridise to one another to form a fluorescent quenched pair. In the methods of the invention, one or more of the primers or oligonucleotides contains at least one phosphorothioate group.