

Title (en)

DEVICE AND METHODS FOR REMOTELY INDUCED THERMAL TRANSDUCTION IN CHEMICAL AND BIOCHEMICAL REACTIONS

Title (de)

GERÄT UND VERFAHREN ZUR DISTANZ-INDUZIERTEN THERMISCHEN TRANSDUKTION IN CHEMISCHEN UND BIOCHEMISCHEN REAKTIONEN

Title (fr)

DISPOSITIF ET PROCEDES DESTINES A UNE CONVERSION THERMIQUE PAR UN TRANSDUCTEUR INDUITE A DISTANCE DANS DES REACTIONS CHIMIQUES ET BIOCHIMIQUES

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Application

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Abstract (en)

[origin: WO9806876A1] A method and device for promoting induced thermal transduction in chemical and biochemical reactions is disclosed. In one preferred embodiment, a method of elongating a primer annealed to a DNA template is disclosed. This method comprises the first step of combining a radio frequency responsive support in an aqueous environment with a DNA template molecule, DNA primers, DNA polymerase, deoxynucleotide triphosphates and reagents necessary to amplify the DNA template. An electromagnetic field is then applied to the combination, wherein the temperature of the support will increase and the DNA template will become denatured. The electromagnetic field is removed and the temperature of the support decreases. The primer molecules anneal to the denatured DNA template and the DNA polymerase catalyzes elongation of the primer. In an especially preferred embodiment of the present invention, the support is derivatized so that the DNA template molecules are attracted to the surface of the support. The figure diagrams the relationship between PCR reagents, including the DNA template, primers and DNA polymerase, and the radio frequency responsive support.

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