THIS SHEET HAS BEEN
REPLACED

ABSTRACT

Strand Displacement Amplification methods (thermophilic SDA) which can be performed over a broad temperature range (37°C to 70°C). The preferred temperature range for thermophilic SDA is 50°C to 70°C. It has been found that certain thermophilic restriction endonucleases are capable of nicking the hemimodified restriction endonuclease recognition/cleavage site as required by SDA and dissociating from the site. It has further been found that certain thermophilic polymerases are capable of extending from the nick while displacing the downstream strand. Thermophilic SDA, because of reaction temperatures higher than previously possible with conventional SDA enzyme systems, has improved specificity and efficiency, reduced nonspecific background amplification, and potentially improved yields of amplification products. In addition, the need to add the enzymes in a separate step after the initial heat denaturation of double stranded targets is eliminated when enzymes capable of tolerating the denaturation temperature are used.

This Sheet Has Been Replaced