

Determination of optimized conditions for polymerase chain reaction (PCR) by using random primers (RAPD) in pistachio

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The RAPD-PCR method is one of the most important and precise procedures that can be used in identification of polymorphisms of plant species and cultivars. In comparison to the previous methods which have been conducted on identification of gene production such as proteins and enzymes, the mentioned method because of its accuracy and simplicity has advantages in showing more polymorphisms, and omitting the environmental effects.

The miniperpration method has been used to extract leaf DNA from *Pistacia vera* cv. *Kaleghochi*. To find the suitable conditions for polymerase chain reaction (PCR), two concentrations of DNA and two concentrations of decamer random primers were used. Among treatment, application of 50mg DNA and 0.6 μ mol primors accompanied with appropriate heating cycles prepared best condition for PCR reaction. The OPN-08 primer with the sequence of ACCTCAGCTC produced six distinct bands and the OPN-09 primer with the sequence of TGCCGGCTTG produced five. This research work can be considered the first basic research of its kind on pistachio in Iran.