

## Abstract

Due to the production of dates in the country, identification of new cultivars, correction of available varieties and the study of diversity among different varieties are necessary. To do this research, the leaves of 15 different varieties of dates were collected from Saravan city and their DNA was extracted using Dolaport method. DNA quality and quantity was determined using 1% agarose gel and spectrophotometer. PCR was performed using the *matk* and *rbcl* genes according to the requirements of the PCR reaction and PCR products were sent for sequencing. The quality of the sequences was investigated using Chromas software and then clustered with MegAlign software using ClustalW method, and a dendrogram of phylogenic relationships and similarity matrix of sequences were drawn. The results of this study showed that for the *matk* marker, a total of 1019 positions were identified, with 672 positions removed and added, and 347 without removal and addition. The highest rate of transfer was obtained from purine (21.66%) and the least amount of pyrimidine (7.63%). The numerical value (dN / dS) was equal to 169, the genetic distance from 0/019 to 1/,238 and the highest variation in the region was related to Jm20holeileh cultivar. For the *rbcl* marker, a total of 553 positions were identified, with 505 positions with deletion and addition, and 48 without removal and addition. The highest rate of transfer was of purine (17.68%) and the least amount of pyrimidine (88.8%). The numerical value (dN / dS) was 0 133, the genetic distance was from 0.007 to 0.918 and the most intra-regional variation was related to the Kaloot Jn3 cultivar. The results of the study showed that the *matk* and *rbcl* markers are suitable for evaluation between species. Considering that the origin or origin of the plants belong to the centers that are most diverse and because of the dates of the Helilah Saravan and Kohl Saravan As a result, it is necessary to pay more attention to the collection of germplasm for breeding breeding in Saravan Baluchestan.

Key words: dates, genetic variation, *rbcl* , *matk*



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