عنوان مقاله:

Cryopreservation Procedure Technique in Medicinal Plants

محل انتشار:

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خلاصه مقاله:

Preservation is a suitable method to preserve the plant for consecutive years. The motivation of the initial studies for the protection of plants is to identify freezing methods for the preservation of plant organs during consecutive years. Preservation to preserve plant organs includes almost all plant parts in liquid nitrogen at very low temperatures (usually -۱۹۶ degrees Celsius), which is a practical and economical method compared to field preservation methods. In order to preserve the genetic treasury of threatened plants, it is necessary to use freezing protection technology. It is necessary to use appropriate pretreatments for freezing protection. The most important and widely used pretreatment is coating and dewatering as a practical technique. Gene banks based on cryopreservation and biotechnology-based techniques are expanding in the world, and the protection and optimal use of germplasm reserves are of great importance in all countries. Preservation of plant genetic resources guarantees the sustainability of genetic progress in other cultivars, especially commercial cultivars, which have high economic value. In other words, every plant is an important gene store for a breed. Plants are exposed to various risks caused by adverse environmental conditions, both biotic and abiotic stresses. These unfavorable and inappropriate conditions can remove plants from the planet and subsequently, the valuable gene treasury is removed. Protection and maintenance of plant biodiversity are very necessary for plant breeding programs, genetic engineering, etc. Of course, it should be noted that the preservation for successive years of plant organs using the cryopreservation method is only successful if the formation of ice crystals (with appropriate and standard plant dehydration) is prevented inside the cell.

کلمات کلیدی:

Freezing, Genetic stability, Germplasm, Preservation, Protection