

技术与方法

适合于植物花器官的冰冻切片技术

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摘要 通过对4种植物主要花器官冰冻切片技术的各个环节及参数的研究,建立了一种适合于植物花器官的冰冻切片技术,即蔗糖保护-液氮速冻-冰冻切片法.其具体程序是:材料经固定和冷冻保护(蔗糖为冷冻保护剂)后进行速冻包埋(液氮为包埋剂);尔后进行冰冻切片;切片经干燥和染色(或者不染色)后,在显微镜下观察并摄影.此法为植物花器官的细胞生物学和分子生物学研究提供了简便、快速和高效的切片技术.

关键词 [花器官](#) [冰冻切片技术](#)

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Suitable Cryo-sectioning Technique in Floral Organs of Plants

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Abstract With studying on the technical parameters of cryo-sectioning in floral organs of four plant species, we established a suitable cryo-sectioning method for floral organs of plants. The procedure consisted of several steps as follows. The materials were taken out and fixed in solution contained cryo-protected reagent (sucrose). The fixed samples were embedded, frozen in liquid nitrogen and cryo-sectioned. Then, the sections were dried, stained or not and photographed. This method was better than single liquid freezing or sucrose-protecting or direct cryo-section. The fine structures of ovaries, anthers and shoot apical buds in four plant species were displayed by the sucrose-protecting and liquid nitrogen frozen cryo-sectioning technique. One important point is that the different concentrations of sucrose were used during fixing because of varied plant tissue structures and osmotic pressure, and the sucrose level suitable for the floral organs of the four species were also investigated.

Key words [Floral organs](#) [Cryo-sectioning technique](#)

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