

生物技术·植物遗传育种

E物质对红叶石楠“红罗宾”组培苗生根及相关酶活性的影响^{*}

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摘要 通过对与生根密切相关的酶(POD, IAAO, PPO)活性的测定,发现E物质的添加与否对红叶石楠生根苗中的POD, IAAO, PPO活性存在很大差异。在添加有E物质的培养基上,酶活性均表现为易生根的变化规律;而在未添加E物质的培养基上,酶活性均表现为生根难的变化趋势。从而进一步从生理生化的角度论证了E物质添加与否,直接影响到红叶石楠的生根率、出根时间、整齐度以及出瓶时间。

关键词 [红叶石楠“红罗宾”](#) [离体培养](#) [生根](#) [E物质](#) [酶活性](#)

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Effects of Substance E on Rooting and Activities of Correlative Enzymes of *Photinia fraseri* "Red Robin" in Vitro

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Abstract

In this study, the results showed that, whether E substance was added in the basal medium or not, it had strong influence on rooting of *Photinia fraseri* in vitro and activities of some enzymes related to rooting (POD, IAAO and PPO); the activities of all tested enzymes of *Photinia fraseri* cultured in the medium added with substance E took on the change law of rooting easily, while all the tested enzymes' activities of *Photinia fraseri* in the medium without substance E displayed the change tendency of being unfavorable to rooting, even to difficult rooting. As a result, from the point of physiological and biochemical study, it was further proved that whether substance E existed in the medium or not had direct influence on the rooting rate, rooting time and uniformity, and transplanting time of plantlets of *Photinia fraseri* in vitro.

Key words [Photinia fraseri "Red Robin"](#) [in vitro](#) [rooting](#) [substance E](#) [enzymes' activities](#)

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