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研究报告

新型试管花卉姬松高效再生体系的研究

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A Highly Efficient in Vitro Regeneration Protocol for Crassula clavata as Novel Tube-flower

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摘要 以新型试管花卉多肉类植物姬松（Crassula clavata N. E. Brown）为材料进行高效再生体系的研究。结果表明：以姬松茎尖为外植体的初代培养中，MS 培养基添加IBA 并未诱导出根系生成，而是直接诱导出丛生芽，在MS + IBA 0.3 mg · L-1 培养基上，由叶片表面诱导出的丛生芽质量最佳；在继代培养中，最佳培养基为MS + NAA 0.1 mg · L-1 + 6-BA 0.5 mg · L-1，诱导产生大量胚性愈伤组织，且表面有
芽体分化；在彩色培养中，在1/2MS 中添加0.25 mg · L-1 的食用色素亮蓝，观赏效果佳且对植株生长无毒害。

关键词： 姬松 快繁 试管花卉 再生体系

Abstract： Tube-flower is a novel form of in vitro plant products. A highly efficient in vitro regeneration system was established for the production of succulent plant Crassula clavata N. E. Brown. In primary culture，adventitious buds instead of adventitious roots were differentiated from the shoot explants on MS medium supplemented with different concentrations of IBA；The highest multiplication rate and high-quality adventitious buds were obtained on the optimal medium of MS containing 0.3 mg · L-1 IBA. In subculture，the medium of MS containing 0.1 mg · L-1 NAA and 0.5 mg · L-1 6-BA was screened out for large amounts of embryogenic callus could be significantly induced and sprouts could be further differentiated on the callus surface. In culture for colorful decorative products，0.25 mg · L-1 edible colourant to half strength MS medium was feasible to give pleasant visual effect without harmful or toxic effect on the in vitro plants.

Keywords： Crassula clavata N. E. Brown, micro-propagation, tube-flower, regeneration system

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[1] 王 玲;杨丽鹏;张秀珍;马喜娟 .东北百里香组培再生体系的建立 [J]. 园艺学报, 2011,38(6): 1185-1190

[2] 顾德峰;李东升;王蕾;齐广勋;赵和祥;董然.东亚对开蕨离体快繁的研究[J]. 园艺学报, 2008,35(9): 1373-1376

[3] 吕英民;;曹 亮;张启翔;.真梅系梅花品种‘铁骨红’的离体繁殖[J]. 园艺学报, 2007,34(4): 1047-1049

[4] 罗娅;汤浩茹;李秀梅;王小蓉.梨矮化中间砧S2 、S5 和PDR54的离体培养研究[J]. 园艺学报, 2006,33(5): 1063-1066
[5] 瞿素萍;熊　丽;李树发;王丽花;唐开学.云南野生早花象牙参叶片再生体系的建立[J]. 园艺学报, 2006,33(2): 441-444
[6] 张常青;洪　波;王海琴;高俊平.地被月季‘Royal Bassino’高频再生体系的建立[J]. 园艺学报, 2005,32(6): 1065-1069
[7] 刘福平;苏明华;章宁;林清洪.球根海棠离体培养的形态发生研究[J]. 园艺学报, 2004,34(5): 694-696
[8] 黄文江;刘庆忠;樊圣华;赵红军;马锋旺.甜樱桃砧木吉塞拉(Gisela)叶片再生体系研究[J]. 园艺学报, 2004,31(2): 221-223
[9] 赵长增;陆璐;陈佰鸿.食用仙人掌‘米邦塔’的试管快繁[J]. 园艺学报, 2003,30(5): 609-611
[10] 侯爱菊;朱延明;杨爱馥;张彬彬.诱导黄瓜直接器官发生主要影响因素的研究[J]. 园艺学报, 2003,30(1): 101-103