

论文

掌叶大黄毛状根培养及培养物中蒽醌类成分分析

常振战;果德安;沈昕;王沙生;郑俊华

北京医科大学生化及分子生物学系,*天然药物学系,北京100083;**北京林业大学生物学院,北京100083

摘要:

关键词: 掌叶大黄 毛状根 蒽醌类化合物

ANTHRAQUINONE PRODUCTION AND ANALYSIS IN THE HAIRY ROOT CULTURES OF *RHEUM PALMATUM* L.

Chang Zhenzhan; Guo De'an; Shen Xin; Wang Shasheng and Zheng Junhua

Abstract:

Hairy root culture of the medicinal plant *Rheum palmatum* L. was established by genetic transformation with *Agrobacterium rhizogenes*. The effects of various media with different pH on growth of the hairy roots and biosynthesis of free anthraquinones were investigated. The experimental results showed that MS agar medium with pH 5.5~5.8 is suitable for growth of the hairy roots. Dark condition is favourable and 62.5-fold increase in fresh weight was reached within a culture period of 25 days. Auxin (0.1 mg·L⁻¹ IAA) activated the hairy root growth but inhibited the biosynthesis of free anthraquinones. About 28% of the total free anthraquinones was released into the liquid medium from the rhubarb hairy roots.

Keywords: Hairy roots Anthraquinones *Rheum palmatum* L.

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作者简介:

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