中国中药杂志
China Journal of Chinese Materia Medica

展青霉素产生菌对中药材的侵染及其毒素生物合成的研究

投稿时间： 2011-03-23 责任编辑：吕冬梅 点此下载全文

引用本文：江曙,杨美华,段金廒,陶金华,钱大玮.展青霉素产生菌对中药材的侵染及其毒素生物合成的研究[J].中国中药杂志,2011,36(14):1936.

DOI：10.4268/cjcmm20111420

作者中文名	作者英文名	单位中文名	单位英文名	**E-Mail**
江曙	JIANG Shu	南京中医药大学,江苏 南京 210046	Nanjing University of Traditional Chinese Medicine, Nanjing 210046, China	jiangshu1970@yahoo.com.cn
杨美华	YANG Meihua	中国医学科学院 北京协和医学院 药用植物研究所,北京 100193	Insititute of Medicinal Plant Development, Chinese Academy of Medical Sciences, Beijing 100193, China	
段金廒	DUAN Jin'ao	南京中医药大学,江苏 南京 210046	Nanjing University of Traditional Chinese Medicine, Nanjing 210046, China	
陶金华	TAO Jinhua	南通大学 医学院,江苏 南通 226019	Medical School, Nantong University, Nantong 226019, China	
钱大玮	QIAN Dawei	南京中医药大学,江苏 南京 210046	Nanjing University of Traditional Chinese Medicine, Nanjing 210046, China	

基金项目:国家"重大新药创制"科技重大专项(2009ZX09502-025)

中文摘要:目的: 研究展青霉素产生菌对不同种类药材侵染的影响以及毒素积累规律。 方法: 采用微生物学及HPLC的分析方法研究不同环境条件下展青霉素产生菌侵染及毒素生物合成的特性。 结果: 展青霉素产生菌容易侵染富含淀粉以及其他糖类物质的药材,且在25 ℃,95%湿度和散装的条件下,菌体生长良好,毒素产量较高,较低的光照度对菌体生长和毒素生物合成没有明显的影响;此外,进行样品稳定性、精密度、重复性和回收率实验,建立了展青霉素HPLC的分析方法,检测方法可靠、稳定。 结论: 建立适宜的药材贮藏条件能有效控制产毒素微生物对中药材的侵染,因此开展产毒素微生物的生长特性及毒素生物合成机制的研究具有重要的实践指导意义,为建立中药安全性的系统评价体系奠定基础。

中文关键词:展青霉素 药材 侵染

Research on patulin biosynthesis and infection of Chinese medicinal materials by its producing strains

Abstract: Objective: To investigate the effect of patulin producing strains on the different Chinese medicinal materials and the toxin biosynthesis mechanism. Method: Microbiology and HPLC analytical methods were adopted in this paper. Result: It was showed that the materials rich in starch and other polysaccharides were easily polluted by the patulin producing strain. This strain grew well and produced more toxins under 25 ℃, 95% moisture content and bulk package. And the effect of low illumination intensity on the strain growth and toxin biosynthesis was not notable. Sample stability, precision, repeatability and rate of recovery were studied. HPLC analytic method was established and it revealed that the test method was suitable. Conclusion: The pollution of Chinese medicinal materials by toxin producing microbes will be effectively controlled through establishing the suitable storage methods. So the study on the growing characteristics and toxin biosynthesis mechanism of toxin producing strains will be an important practical significance for controlling the toxin pollution of herbal medicines and contribute to establish the evaluation system of Chinese medicine safety.

keywords:patulin Chinese medicinal materials infection

查看全文 查看/发表评论 下载PDF阅读器