

双向固体发酵前后钩吻中生物碱含量变化研究^{*}

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摘要:目的 研究钩吻被多种药用真菌固体发酵后生物碱含量的变化。方法 运用双向固体发酵的原理与技术, 将钩吻生品作为“药性基质”, 灵芝、云芝、茯苓等5种不同药用真菌分别接种到灭菌的钩吻“药性基质”上, 在特定条件下进行发酵, 得到钩吻“药性菌质”。采用 HPLC 法对发酵前后钩吻中钩吻碱甲、钩吻素子、钩吻素己、钩吻绿碱、胡蔓藤碱乙的含量进行测定。结果 在同一发酵条件下, 5种不同真菌对钩吻的发酵情况有所不同, “药性菌质”中各生物碱成分含量与钩吻生品相比, 均呈不同程度下降的趋势, 且色谱图中显示出一个新产生的未知成分。结论 双向固体发酵后, 菌丝体生长良好的钩吻发酵物中钩吻生物碱成分发生了质和量的明显变化, 该法可能对钩吻的减毒增效物质基础研究具有重要意义。

关键词: 钩吻; 双向固体发酵; 钩吻生物碱; HPLC

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A Study on Variation of Alkaloid Contents in Gelsemium Before and After Bidirectional Solid Fermentation

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Abstract Objective: To determine the content of alkaloids in solid gelsemium fermented by medicinal fungus.

Method: With the principle and technique of bi-directional solid fermentation, the raw sterilized gelsemium, as a kind of drug matrix, was inoculated five different drugs as ganoderma lucidum, trametes versicolor, poria cocos etc., and fermented in specific conditions to obtain the needed property of medicinal fungal substance. The HPLC method was used to detect the contents of gelsemine, koumine, gelsenicine, gelsevirine and humantenine before and after the experiment.

Results: Under the same circumstance, the five different fungus implementing different effects on fermentation of gelsemium, the contents of alkaloids in inoculated gelsemium tended to decrease to varying degrees and a new-born unknown result showed in the chromatogram map after the comparison of those factors with the raw gelsemium. **Discus-**

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