

研究简报

并行捕集柱SFE-HPLC在线联用系统的构建及应用

张洁¹, 梁振¹, 张丽华¹, 张维冰¹, 霍玉书², 张玉奎¹

1. 中国科学院大连化学物理研究所, 国家色谱研究分析中心, 大连 116023;
2. 德克萨斯大学健康科学中心, 圣安东尼奥 78229-3900

收稿日期 2006-1-24 修回日期 网络版发布日期 2006-12-1 接受日期

摘要 在前期研究的基础上, 发展了采用自动十通阀/并行捕集柱接口构建了SFE和HPLC在线联用的新装置, 并利用该系统对灵芝子实体的超临界萃取过程进行实时监测.

关键词 [超临界流体萃取](#), [高效液相色谱](#), [灵芝](#)

分类号 [O657](#)

DOI:

Establishment and Application of On-line Parallel-trap SFE-HPLC System

ZHANG Jie¹, LIANG Zhen¹, ZHANG Li-Hua¹, ZHANG Wei-Bing¹, HUO Yu-Shu², ZHANG Yu-Kui¹

1. National Chromatographic R&A Center, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian 116023, China;
2. Health Science Center at San Antonio, The University of Texas, San Antonio 78229-3900, USA

Received 2006-1-24 Revised Online 2006-12-1 Accepted

Abstract A novel on-line parallel-trap supercritical fluid extraction(SFE)-high performance liquid chromatography(HPLC) system was established. The interfere consisted of automated ten-port valve and were used to carry out continuous and alternate trapping and transferring of the sample extracted with supercritical carbon dioxide, and HPLC was used to analyze the transferred sample. The novel was used to monitor the extraction process of fruiting bodies of *Ganoderma lucidum*. The extracts of six consecutive cycles were analyzed and the optimum extraction time was determined, which accorded with the result obtained with off-line extraction. Using this system, the whole process can be monitored and the optimum extraction time can be determined with single run. In addition, it has many other advantages such as low sample loading, high sensitivity and accuracy, short analysis time, avoiding sample sensitivity and easily operation *etc.* The system shows a great potential in the extraction and analysis of the complex samples including traditional Chinese medicine and environmental samples *etc.*

Key words [Supercritical fluid extraction](#); [High performance liquid chromatography](#); [Ganoderma lucidum](#)

通讯作者:

张玉奎 张玉奎ykzhang@dicp.ac.cn

作者个人主页: 张洁¹; 梁振¹; 张丽华¹; 张维冰¹; 霍玉书²; 张玉奎¹