

论文

动态超声萃取分光光度法在线测定红花中的总红花黄色素

胡秀丽^{1,2}, 游景艳¹, 张寒琦¹, 张华蓉¹, 孟祥哲¹, 肖婷婷¹, 范玉贞¹, 王影¹, 于爱民¹

- 1. 吉林大学化学学院, 长春 130012;
- 2. 吉林大学药学院, 长春 130023

摘要:

用动态超声萃取分光光度法在线测定了红花中的红花黄色素, 对萃取条件进行了优化. 萃取与测定同时进行, 大大缩短了样品的分析时间, 简化了分析过程. 通过与静态超声萃取、振荡萃取和索式萃取进行比较, 不仅证明该方法耗时最短, 而且样品用量小, 萃取产率较高. 实际样品分析得到了满意的结果.

关键词: 超声辅助动态萃取 在线检测 红花黄色素 红花

Determination of Total Safflower Yellow Pigments in *Carthamus tinctorius* L. by Dynamic Ultrasonic Extraction Coupled with On-line Spectrophotometric Detection

HU Xiu-Li^{1,2}, YOU Jing-Yan¹, ZHANG Han-Qi¹, ZHANG Hua-Rong¹, MENG Xiang-Zhe¹, XIAO Ting-Ting¹, FAN Yu-Zhen¹, WANG Ying¹, YU Ai-Min^{1*}

- 1. College of Chemistry, Jilin University, Changchun 130012, China;
- 2. College of Pharmacy, Jilin University, Changchun 130023, China

Abstract:

A dynamic ultrasonic extraction(DUE) coupled with on-line detection by spectrophotometry was proposed for the determination of total safflower yellow pigments(calculated against safflor yellow A) in *Carthamus tinctorius* L. The extraction was performed in a common self-made extraction vessel placed inside an ultrasonic bath and a peristaltic pump was used to deliver the solvent. Several parameters of DUE, including flow rate of extraction solvent, ultrasonic power and sample amount, were optimized. Compared to the off-line method, the on-line approach has the advantages of minimum sample amount (5 mg), on-line monitoring the extraction process and time-saving(10 min) and the method is more convenient for rapid optimization of the extraction process.

扩展功能

本文信息

Supporting info

PDF(308KB)

[HTML全文](OKB)

参考文献[PDF]

参考文献

服务与反馈

把本文推荐给朋友

加入我的书架

加入引用管理器

引用本文

Email Alert

文章反馈

浏览反馈信息

本文关键词相关文章

- ▶ 超声辅助动态萃取
- ▶ 在线检测
- ▶ 红花黄色素
- ▶ 红花

本文作者相关文章

- ▶ 胡秀丽
- ▶ 游景艳
- ▶ 张寒琦
- ▶ 张华蓉
- ▶ 孟祥哲
- ▶ 肖婷婷
- ▶ 范玉贞
- ▶ 王影
- ▶ 于爱民
- ▶ 胡秀丽
- ▶ 游景艳
- ▶ 张寒琦
- ▶ 张华蓉
- ▶ 孟祥哲
- ▶ 肖婷婷
- ▶ 范玉贞
- ▶ 王影
- ▶ 于爱民

PubMed

- Article by
- Article by
- Article by
- Article by
- Article by

Keywords: Dynamic ultrasound-assisted extraction On-line detection Safflower yellow pigments *Carthamus tinctorius* L.

收稿日期 2007-10-11 修回日期 1900-01-01 网络版发布日期

DOI:

基金项目:

通讯作者: 于爱民

作者简介:

参考文献:

1. The Pharmacopoeia Commission. Pharmacopoeia of the People's Republic of China, Vol. 1(中华人民共和国药典, 第一卷)[M], Beijing: Chemical Industry Publishing House, 2000: 119
2. Takahashi Y., Miyasaka N., Tasaka S., *et al.*. Tetrahedron Lett.[J], 1982, 23(49): 5163—5166
3. Meselhy R., Kadota S., Momose Y., *et al.*. Chem. Pharm. Bull.[J], 1993, 41(10): 1796—1802
4. Japón-Luján R., Luque-Rodríguez J. M., Luque de Castro M. D.. J. Chromatogr. A[J], 2006, 1108(1): 76—82
5. Nascentes C. C., Korn M., Arruda M. A. Z.. Microchem. J.[J], 2001, 69(1): 37—43
6. Nieva-Cano M. J., Rubio-Barroso S., Santos-Delgado M. J.. Analyst[J], 2001, 126(8): 1326—1331
7. Gimeno R. A., Marcé R. M., Borrull F.. Chromatographia[J], 2003, 58(1/2): 37—41
8. LI Min-Jing(李敏晶), YOU Jing-Yan(游景艳), LIU Zhong-Ying(刘忠英), *et al.*. Chem. J. Chinese Universities(高等学校化学学报)[J], 2004, 25(5): 850—852
9. DING Lan(丁兰), LI Yi(李毅), LI Min-Jing(李敏晶), *et al.*. Chem. J. Chinese Universities(高等学校化学学报)[J], 2003, 24(8): 1403—1405
10. Moreno-Cid A., Yebra M. C.. Spectrochimica Acta B[J], 2002, 57(5): 967—974
11. Ruiz-Jimenez J., Luque-Garcia J. L., de Castro M. D. L.. Anal. Chim. Acta[J], 2003, 480(2): 231—237
12. YOU Jing-Yan, ZHANG Hua-Rong, DING Lan, *et al.*. Chem. Res. Chinese Universities, 2007, 23(2): 148—153
13. JIANG Ping(蒋平), WEN Yong-Sheng(文永盛), FAN Yao(范耀), *et al.*. Chin. Hosp. Pharm. J.(中国医院药学杂志)[J], 2006, 26(8): 932—935

本刊中的类似文章

文章评论

| 序号 | 时间 | 反馈人 | 邮箱 | 标题 | 内容 |
|----|-------|----------|----------------|---------|--|
| 1 | 2009- | reviewer | edfwan@163.com | edwelle | Buy discount ugg cheap ugg shoes ugg ugg rainier boots ugg usa discount boots ugg 5825 shoes sale ugg su |