

研究论文

高效液相色谱法同时测定黄芪中的五种异黄酮类成分

王晓辉 刘涛 李清 陈晓辉 毕开顺

沈阳药科大学药学院, 辽宁 沈阳 110016

收稿日期 2005-10-27 修回日期 2005-12-16 网络版发布日期 2006-10-13 接受日期

摘要 对蒙古黄芪中5种异黄酮类成分的含量进行了反相高效液相色谱法测定。色谱柱为Diamonsil C18柱, 流动相为乙腈-水系统, 梯度洗脱, 检测波长230 nm, 柱温35 °C。毛蕊异黄酮-7-O-β-D-葡萄糖苷在20.12~201.2 mg/L、芒丙花素-7-O-β-D-葡萄糖苷在4.62~46.2 mg/L、9,10-二甲氧基紫檀烷-3-O-β-D-葡萄糖苷在4.86~48.6 mg/L、毛蕊异黄酮在9.24~92.4 mg/L、芒丙花素在6.92~69.2 mg/L时峰面积与浓度呈良好的线性关系, 相关系数分别为0.9992, 0.9997, 0.9997, 0.9995和0.9995。5种成分的加样回收率均高于94%, 相对标准偏差(RSD)小于3.2%(n=9)。该法简便快速, 重复性良好, 结果准确可靠, 可用于黄芪药材中5种主要异黄酮类成分的含量测定。

关键词 [反相高效液相色谱法](#) [异黄酮](#) [黄芪](#)

分类号

Simultaneous Determination of Five Isoflavonoids in Commercial Radix Astragali by High Performance Liquid Chromatography

WANG Xiaohui, LIU Tao, LI Qing, CHEN Xiaohui, BI Kaishun

School of Pharmacy, Shenyang Pharmaceutical University, Shenyang 110016, China

Abstract

A reversed-phase high performance liquid chromatographic method (RP-HPLC) was developed for the simultaneous analysis of five isoflavonoids of Huangqi, the roots of Astragalus mongholicus. HPLC determination was performed on a Diamonsil C18 column (200 mm × 4.6 mm i.d., 5 μm) and detected at 230 nm. The mobile phase consisted of (A) acetonitrile and (B)water. Gradient program was adopted as follows: 0-25 min from 17%A to 31%A, 25-45 min 35%A. The flow rate was maintained at 1.0 mL/min. The method was proved to be linear in the ranges of 20.12-201.2 mg/L (r=0.9992), 4.62-46.2 mg/L (r=0.9997), 4.86-48.6 mg/L (r=0.9997), 9.24-92.4 mg/L (r=0.9995) and 6.92-69.2 mg/L (r=0.9995) for the five isoflavonoids, calycosin-7-O-β-D-glucoside, formononetin-7-O-β-D-glucoside, 9,10-dimethoxypterocarpan-3-O-β-D-glucoside, calycosin and formononetin, respectively. The recoveries were greater than 94%, and relative standard deviations were less than 3.2%. The method has been successfully applied to the simultaneous determination of the five isoflavonoids of radix astragali.

Key words [reversed-phase high performance liquid chromatography \(RP-HPLC\)](#) [isoflavonoid](#) [radix astragali](#)

DOI:

通讯作者 毕开顺 Bikaishun@yahoo.com

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(208KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [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](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含 “反相高效液相色谱法” 的相关文章](#)
- ▶ [本文作者相关文章](#)
- [王晓辉 刘涛 李清 陈晓辉 毕开顺](#)