



HPLC测定藏药麻花芫地上部位5种有效成分的含量

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作者中文名	作者英文名	单位中文名	单位英文名	E-Mail
聂颖杰	NIE Yingjie	青海民族大学 化学与生命科学学院, 青海, 西宁 810000	College of Chemistry and Life Sciences, Qinghai University for Nationalities, Xi'ning 810000, China	
林鹏程	LIN Pengcheng	青海民族大学 化学与生命科学学院, 青海, 西宁 810000	College of Chemistry and Life Sciences, Qinghai University for Nationalities, Xi'ning 810000, China	qhpjc@126.com

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中文摘要: 目的: 建立藏药麻花芫地上部位5种有效成分的含量测定方法。方法: 采用Hypersil ODS柱(4.6 mm×250 mm, 5 μm), 流动相以甲醇(A)-0.02%磷酸水溶液(B)梯度洗脱。0~10 min, 以20% A洗脱, 10~30 min, 从20% A线性变化至50% A。流速1 mL·min⁻¹, 柱温35 ℃, 检测波长254 nm。结果: 5种有效成分均达到基线分离, 各成分相关系数及范围分别是: 落干酸 $r=0.999\ 9, 0.364\text{--}2.18\ \mu\text{g}$; 獐牙菜苦苷 $r=0.999\ 9, 0.275\text{--}1.65\ \mu\text{g}$; 龙胆苦苷 $r=0.999\ 9, 0.614\text{--}3.68\ \mu\text{g}$; 獐牙菜苦苷 $r=0.999\ 9, 0.065\ 6\text{--}0.394\ \mu\text{g}$; 异荛素 $r=0.999\ 9, 0.089\ 9\text{--}0.539\ \mu\text{g}$ 。5种有效成分中落干酸和龙胆苦苷远较其他3种成分的含量高, 达到总含量的60%以上。结论: 方法快速、灵敏、准确、可靠, 重复性好, 可用于藏药麻花芫地上部位药材的质量控制。

中文关键词: 麻花芫 落干酸 獐牙菜苦苷 龙胆苦苷 獐牙菜苦苷 异荛素 HPLC

Determination of five active constituents in aerial part of Tibetan medicine *Gentiana straminea* by HPLC

Abstract: A new RP-HPLC method was developed for the simultaneous determination of 5 active constituents, including loganic acid, swertiamarin, gentiopicroside, sweroside, isoorientin in aerial part of *Gentiana straminea*. Analysis was achieved on a Hypersil ODS analytical column (4.6 mm×250 mm, 5 μm) eluted with methanol and water containing 0.02% phosphoric acid in gradient elution. The flow rate was 1 mL·min⁻¹, the column temperature was set at 35 ℃ and detection wavelength was set at 254 nm. The results showed that 5 active components were separated well and showed good linearity. The correlation coefficients and concentration ranges of the calibration curves were as follows: $r=0.999\ 9, 0.364\text{--}2.18\ \mu\text{g}$ for loganic acid; $r=0.999\ 9, 0.275\text{--}1.65\ \mu\text{g}$ for swertiamarin; $r=0.999\ 9, 0.614\text{--}3.68\ \mu\text{g}$ for gentiopicroside; $r=0.999\ 9, 0.065\ 6\text{--}0.394\ \mu\text{g}$ for sweroside; $r=0.999\ 9, 0.089\ 9\text{--}0.539\ \mu\text{g}$ for isoorientin. The contents of loganic acid and gentiopicroside far exceed that of the other 3 active components, and made up 60% in the total contents. The developed method was proved to be rapid, sensitive, accurate, credible and repeatable. It can be applied to quality control of aerial part of Tibetan medicine *Gentiana straminea*.

Keywords: *Gentiana straminea* aerial part loganic acid swertiamarin gentiopicroside sweroside isoorientin HPLC

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