



HPLC-ELSD法同时测定知母药材中2种皂苷含量

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中文摘要:目的:用HPLC-ELSD同时测定知母药材中2种皂苷的含量。方法:采用Kromasil C₁₈柱(4.6 mm×250 mm, 5 μm),以甲醇-水梯度洗脱,流速1 mL·min⁻¹,柱温为30℃。蒸发光散射检测器漂移管温度50℃,蒸发温度70℃,以氮气为雾化气,压力为1.03×10⁵ Pa。结果:知母皂苷C在0.310~3.10 μg,知母皂苷AIII在0.323~3.23 μg,进样质量的对数值与峰面积的对数值呈良好的线性关系。知母皂苷C回归方程为lgA=1.254 2lgM+5.734 7, r=0.999 5,测定的平均回收率(α=6.98.1%,RSD 2.0%;知母皂苷AIII回归方程为lgA=1.328 4lgM+5.937, r=0.999 6,测定的平均回收率(α=6.97.3%,RSD 1.5%。结论:建立的含量测定方法准确、快速,是控制知母药材质量较理想的方法。对我国北方主要知母产地药材中两种皂苷含量测定和比较表明不同产地野生知母质量差异较大。

中文关键词:知母 高效液相蒸发光检测 知母皂苷C 知母皂苷AIII 含量测定

Simultaneous determination of two saponnins in Anemarrhenae Rhizoma by HPLC-ELSD

Abstract: Objective: To establish an HPLC-ELSD method for determination of Anemarsaponin C and Anemarsaponin AIII in Anemarrhenae Rhizoma. Method: Kromasil C₁₈ column(4.6 mm×250 mm, 5 μm) was used as stationary phase. Mobile phase was methanol-water gradient with the flow rate of 1 mL·min⁻¹; the temperature of the drift tube and evaporation was 50℃ and 70℃ respectively. The gas pressure was 1.03×10⁵ Pa. Result: There are good linearity in the range 0.310-3.10 μg of anemarsaponin C (lgA=1.254 2lgM+5.734 7, r=0.999 5) and in the range 0.323-3.23 μg (lgA=1.328 4lgM+5.937, r=0.999 6) of anemarsaponin AIII. The average recovery of anemarsaponin C and anemarsaponin AIII was 98.1% with RSD 2.1% and 97.3% with RSD 1.5%(n=6) respectively. Conclusion: The method is rapid and accurate. It is suitable for quality control of Anemarrhenae Rhizoma. The result of determination reveals that the quality of Anemarrhenae Rhizoma from different places of north China are of notable difference.

keywords: Anemarrhenae Rhizoma HPLC-ELSD anemarsaponin C anemarsaponin AIII determination

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