

制备型高效液相色谱法分离纯化川西獐牙菜提取物中的龙胆苦苷

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Preparation of gentiopicroside from the extract of Swertia mussotii Franch by preparative high performance liquid chromatography

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摘要 龙胆苦苷(GPS)是龙胆类药材及其相关制品质量控制的指标成分。本研究利用制备型高效液相色谱从川西獐牙菜提取物中分离纯化龙胆苦苷对照品。对制备色谱的流动相组成、流速、进样量和检测波长等制备参数进行了优化。采用的色谱柱为C18柱(200 mm×50 mm, 5 μm),流动相为甲醇和0.1%乙酸水溶液(体积比为30:70),流速为75 mL/min,检测波长为254 nm,进样体积为500 μL。在30 min的运行时间内,龙胆苦苷与其他干扰成分得到了很好的分离,产品纯度达到了99%以上。此方法具有快速高效、产品纯度高的特点,可用于制备龙胆苦苷对照品和对龙胆苦苷制品的质量控制。

关键词: 制备型高效液相色谱法 龙胆苦苷 川西獐牙菜

Abstract: A new method for isolation of gentiopicroside (GPS) from Swertia mussotii Franch with reversed phase preparative high performance liquid chromatography (Pre-HPLC) is described. After 95% ethanol extract was obtained with solvent extraction and macroporous resin separation, a fraction containing GPS was acquired and subjected to Pre-HPLC for isolation of target component. The optimum operation parameters were selected as follows: a C18 column (200 mm×50 mm, 5 μm), methanol-0.1% acetic water (30:70, v/v) as the mobile phase at flow rate of 75 mL/min, the detection wavelength at 254 nm, and the injection volume of 500 μL at the mass concentration of 225 g/L. The purity of the product was detected by HPLC method. The result showed that the purity of product was above 99%. The effective and rapid method has been successfully applied to the preparation of GPS from Swertia mussotii Franch.

Keywords: preparative high performance liquid chromatography (Pre-HPLC) gentiopicroside Swertia mussotii Franch

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