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技术与应用

中药滴水珠中Neoechinulin A的分离及测定

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摘要 采用柱色谱法对中药滴水珠中的有效成分Neoechinulin A进行分离纯化，运用现代波谱技术进行结构鉴定，采用反相高效液相色谱法测定其含量。色谱条件：Diamonsil C18柱(250 mm×4.6 mm，5 μm)，流动相为甲醇-0.1%磷酸溶液(体积比为63:37)，流速为1.0 mL/min，柱温为30 ℃，检测波长为225 nm，进样量为10 μL。结果表明，Neoechinulin A的质量浓度在2.0～40.0 mg/L范围内与其峰面积有良好的线性关系(r0.999 5)；方法的加样回收率为98.3%～101.1%。该方法简便、快速、准确，可作为中药滴水珠质量控制的一个有效方法。

关键词 反相高效液相色谱法 吲哚类生物碱 Neoechinulin A 滴水珠 中药

Isolation and determination of Neoechinulin A in Cordate Pinellia Tuber

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Abstract

The Neoechinulin A in Cordate Pinellia Tuber was isolated by column chromatography and identified by mass spectrometry and nuclear magnetic resonance (NMR). A method of reversed-phase high performance liquid chromatography (RP-HPLC) for the determination of the Neoechinulin A in Cordate Pinellia Tuber was developed. The chromatography was performed on a Diamonsil C18 column (250 mm×4.6 mm, 5 μm) with a mixture of methanol and 0.1% phosphoric acid solution (63:37, v/v) as mobile phase at a flow rate of 1.0 mL/min. The detection wavelength was set at 225 nm and the column oven temperature was set at 30 ℃. The volume of injection was 10 μL. There was a good linear relationship (r0.999 5) between the mass concentration and the peak area of Neoechinulin A in the range of 2.0~40.0 mg/L. The recovery was 98.3%~101.1%. The method is rapid and simple with good accuracy, reproducibility and suitable for the quality control of Cordate Pinellia Tuber from different sources.

Key words reversed-phase high performance liquid chromatography (RP-HPLC) indole alkaloids Neoechinulin A Cordate Pinellia Tuber Chinese herbal drug

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