

论文

HPLC和HPCE法测定罂粟壳中3种生物活性生物碱

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摘要:

目的: 建立中药罂粟壳中3种生物活性生物碱吗啡、可待因和罂粟碱的含量测定法, 根据样品测定结果提出其质量评价的建议。方法: HPLC法和HPCE。结果: 用HPLC及HPCE法测定了罂粟壳12个样品中3种生物碱含量, 并根据两种方法含量测定的结果建议罂粟壳所含3种生物碱以吗啡含量不低于0.04%, 可待因含量不低于0.02%以及罂粟碱含量不低于0.01%为宜。结论: 本文建立的HPLC及HPCE含量测定法均具有快速, 简便, 灵敏, 分离度好等特点, 适用于罂粟壳中3种生物碱的分离测定。

关键词: 罂粟壳; 生物碱; 高效液相色谱法; 高效毛细管电泳法; 质量评价

DETERMINATION OF 3 BIO-ACTIVE ALKALOIDS IN THE CHINESE DRUG PERICARPIUM PAPAVERIS BY HPLC AND HPCE

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Abstract:

AIM: To establish HPLC and HPCE methods for determination of 3 bio-active alkaloids (morphine, codeine and papaverine) in the Chinese drug Pericarpium Papaveris, and to evaluate the quality of the drug. METHODS: HPLC system includes ODS column, 0.5% ammonium acetate — 1% triethylamine — methanol (49:1:50) and UV detection (230 nm). HPCE system includes a 50 μm (ID) × 47 cm (effective length is 39.4 cm) capillary, 80 mmol.L<sup>-1</sup> SDS — 60 mmol.L<sup>-1</sup> borax (0.8 mol.L<sup>-1</sup> boric acid adjusted to pH 7.8) — 10% methanol and UV detection (241 nm). RESULTS: From the contents of the 3 bio-active alkaloids in Pericarpium Papaveris it was suggested that the quality of the Chinese drug Pericarpium Papaveris should contain morphine, codeine, and papaverine not less than 0.04%, 0.02% and 0.01%, respectively. CONCLUSION: The two methods prove to be accurate, precise and sensitive, and can be used for the determination of 3 bio-active alkaloids in Pericarpium Papaveris. The two methods and the quality evaluation can be referred for the Chinese Pharmacopeia Commission and institutes for drug control.

Keywords: alkaloids high performance liquid chromatography high performance capillary electrophoresis quality evaluation Pericarpium Papaveris

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