

高效液相色谱-双波长检测-梯度洗脱法同时测定小儿氨酚烷胺颗粒中的3种有效组分

张轶华1*, 姜建国1, 韩学静1, 张世亮2

1. 河北省药品检验所, 河北 石家庄 050011; 2. 浙江中医药大学, 浙江 杭州 310053

Simultaneous determination of three components in Pediatric Paracetamol and Amantadine Hydrochloride Granules using high performance liquid chromatography with gradient elution and dual wavelength detection

ZHANG Yihua1*, JIANG Jianguo1, HAN Xuejing1, ZHANG Shiliang2

1. Hebei Provincial Institute for Drug Control, Shijiazhuang 050011, China; 2. Zhejiang Chinese Medical University, Hangzhou 310053, China

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摘要 建立了高效液相色谱(HPLC)-双波长检测-梯度洗脱同时测定小儿氨酚烷胺颗粒中对乙酰氨基酚、咖啡因和马来酸氯苯那敏含量的分析方法。采用的色谱条件:以Diamonsil C18色谱柱(4.6×200 mm, 5 μm)为分离柱,以乙腈和0.1%三乙胺水溶液(用磷酸调pH至3.7±0.5)为流动相进行梯度洗脱,流速1.0 mL/min,检测波长为280 nm和210 nm,柱温为30 ℃,进样量为5 μL。结果表明,对乙酰氨基酚、咖啡因和马来酸氯苯那敏的线性范围均比较宽(依次为2.4~60、0.14~3.6、0.019~0.48 μg),平均加标回收率均不低于99.0%,而且方法操作简单,重现性好,测定结果准确,可用于更好地控制该制剂的质量。

关键词: 高效液相色谱 双波长检测 对乙酰氨基酚 咖啡因 马来酸氯苯那敏 小儿氨酚烷胺颗粒

Abstract: A high performance liquid chromatographic (HPLC) method was developed for the simultaneous determination of paracetamol, caffeine and chlorphenamine maleate in Pediatric Paracetamol and Amantadine Hydrochloride Granules. The separation was performed on a Diamonsil C18 column with 0.1% triethylamine aqueous solution (adjusted pH to 3.7±0.5) and acetonitrile as the mobile phase of gradient elution at a flow rate of 1.0 mL/min. The detection wavelengths were set at 280 nm and 210 nm. The linearities were wide (2.4~60, 0.14~3.6, 0.019~0.48 μg for paracetamol, caffeine and chlorphenamine maleate, respectively) and the average recoveries were not less than 99.0%. The method is simple, accurate and reproducible. It is a good method for the quality control of Pediatric Paracetamol and Amantadine Hydrochloride Granules.

Keywords: high performance liquid chromatography (HPLC) dual wavelength detection paracetamol caffeine chlorphenamine maleate Pediatric Paracetamol and Amantadine Hydrochloride Granules

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Corresponding Authors: 张轶华, 硕士. Tel: (0311)85212004-8040, E-mail: zhangyihua0915@163.com. Email: zhangyihua0915@163.com

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