

HPLC-MS-MS同时检测大鼠血浆中荜草素、牡荆素和槲皮苷

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作者	单位	E-mail
黄勇	贵阳医学院药学院, 贵阳 550004	
何峰	贵阳医学院药学院, 贵阳 550004	
张治蓉	贵阳医学院药学院, 贵阳 550004	
郑林	贵阳医学院药学院, 贵阳 550004	
兰燕宇	贵阳医学院药学院, 贵阳 550004	
王永林	贵阳医学院药学院, 贵阳 550004	gywyl@gmc.edu.cn

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中文摘要:目的: 建立一种用于同时检测大鼠血浆中荜草素、牡荆素和槲皮苷3种黄酮成分的准确、灵敏的超高压相色谱-串联质谱分析方法, 并研究其在大鼠体内的药代动力学。方法: 大鼠静脉注射注射用复方荜草后, 采用甲醇沉淀血浆蛋白, 通过BEH C₁₈柱分离, 乙腈-0.1%甲酸水梯度洗脱, 采用电喷雾离子化三重四极杆串联质谱, 以多反应监测(MRM)方式进行正离子检测。用于定量分析的二级碎片离子分别为449.2~329.2(荜草素)、433.2~313.0(牡荆素)和449.2~303.4(槲皮苷)。结果: 3种黄酮成分在大鼠血浆中线性关系良好, 日内、日间精密度(RSD)均<15.71%, 准确度在86.25%~112.44%之间。3种黄酮成分在大鼠体内的平均滞留时间均较短在21min以内。结论: 本方法快速、专属性强、灵敏度高, 适用于注射用复方荜草临床前药代动力学研究。

中文关键词: [血浆](#) [大鼠](#) [荜草素](#) [牡荆素](#) [槲皮苷](#) [药理学](#) [超高压相色谱-串联质谱](#)

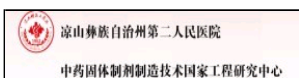
Simultaneous Determination of Orientin, Vitexin and Quercitrin in Rat Plasma by UPLC-MS-MS

Abstract: Objective: To develop a sensitive and reliable ultra performance liquid chromatography tandem mass spectrometry (UPLC-MS-MS) method for simultaneous determination and pharmacokinetics of orientin, vitexin and quercitrin in rat plasma. Method: Following a protein precipitation with methanol for plasma samples after iv Compound Hongcao injection to rat. The analysis was achieved by BEH C₁₈ column and the mobile phase was consisted of acetonitrile and water (0.1% formic acid included) follow step gradient elution. A TQD tandem mass spectrometry equipped with electrospray ionization source was used as detector and operated by multiple reaction monitoring (MRM) positive ion mode of the transitions 449.2-329.2, 433.2-313.0, 449.2-303.4 for orientin, vitexin and quercitrin, respectively. Result: Good linearity was achieved for the three flavonoids, the intra- and inter-day precisions were lower than 15.71%, and the accuracy were from 86.25% to 112.44%. The MRT of the three flavonoids were all blow 21 min in rats. Conclusion: The method was proved to be suitable for the pharmacokinetics of Compound Hongcao injection, which offers advantages of rapid, high sensitivity and selectivity.

keywords: [plasma](#) [rats](#) [orientin](#) [vitexin](#) [quercitrin](#) [pharmacokinetics](#) [UPLC-MS-MS](#)


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