



超高效液相色谱法研究新人参二醇在大鼠尿液中的排泄

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摘要 目的 建立测定大鼠尿液中新人参二醇含量的UPLC-MS/MS分析方法, 研究新人参二醇在大鼠尿液中的排泄情况。方法 尿液样品采用液-液萃取法进行提取, 通过UPLC-MS/MS分析测定单剂量灌胃给予新人参二醇后大鼠尿液中原药的含量, 计算尿液中原药的累积排泄量和平均排泄率。结果 新人参二醇在80~1 280 ng · mL⁻¹呈现良好的线性关系, 质控样品的日内和日间精密度 (RSD) 均小于15%, 方法回收率均高于80%; 大鼠灌胃新人参二醇(100 mg · kg⁻¹)后, 96 h内原药在尿中的累积排泄量占给药剂量百分比为0.023 3%。结论 新人参二醇几乎不以原型的形式从尿中排泄。

关键词: 超高效液相色谱质谱法 新人参二醇 尿液排泄

Abstract: OBJECTIVE To develop a UPLC-MS/MS method for the determination of neopanaxadiol (NPD) in rat urine samples, and to explore the excretion patterns of NPD in rats after oral administration. METHODS NPD was extracted from urine samples by liquid-liquid extraction. The concentration of NPD in urine was determined by UPLC-MS/MS and the cumulative excretion amount and excretion rate of NPD were calculated after a single oral administration of NPD at 100 mg · kg⁻¹ to SD rats. RESULTS Excellent linearity was found between 80-1 280 ng · mL⁻¹. The intra- and inter-day RSDs of the QC samples were both below 15% and the extraction recoveries of NPD were higher than 80%. The cumulative excretion of unchanged NPD in urine within 96 h amounted to (0.023 3±0.035 6) % of the dose. CONCLUSION NPD is hardly eliminated through urine within 96 h in rats.

Keywords: UPLC-MS/MS, neopanaxadiol (NPD), urine excretion

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