

论文

胆汁酸类化合物的毛细管区带电泳法分析

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摘要:

目的建立毛细管区带电泳法分离胆汁酸类化合物。方法缓冲液含硼砂126 mmol·L⁻¹、磷酸氢二钠43 mmol·L⁻¹,18%甲醇,磷酸调至pH 9.3。毛细管柱570 mm×0.05 mm(有效长度500 mm),操作电压30 kV,温度30℃,检测波长200 nm,压力进样,进样量5 kPa×8 s。结果30 min内一次性分离了8种结合型和游离型胆汁酸。加样回收率89%~107%。结论本法简便,可用于熊胆中胆汁酸的测定。

关键词: 胆汁酸 毛细管区带电泳 熊胆

SEPARATION OF BILE ACIDS BY CAPILLARY ZONE ELECTROPHORESIS

ZHU Li-bin; HONG Xiao-kun

Abstract:

AIMTo develop a method for separating the major bile acids by capillary zone electrophoresis (CZE). METHODSThe effect of different separation conditions, such as the compose, pH and the concentration of buffer, on the electro-osmotic flow (EOF), the migration time and resolution of 8 bile acids in this system were studied. The general trends in migration time could be correlated to the pH and concentration of the buffer. The effect of organic reagent on EOF and migration time were also investigated. By addition of methanol, the EOF went smaller than before, and better resolution was achieved. The experimental results showed that optimum separation was achieved under the following condition: buffer composition of 126 mmol·L⁻¹ disodium tetraborate, 43 mmol·L⁻¹ disodium hydrogenphosphate, 18% methanol; temperature 30℃; voltage 30 kV; total length of capillary 570 mm and 500 mm from injection end; ultraviolet detection at 200 nm; pressure injection 5 kPa for 8 s. RESULTSEight kinds of bile acid had been separated by CZE with only one injection. The method was used to analyse the contents of bile acids from different kinds of bear biles, the recovery was 89%~107%. CONCLUSIONThis method is simple and rapid, and can be used to determine the content of bile acids in bear biles. The calibration curve showed good linearity for eight bile acids in the concentration range of 4~60 mg·mL⁻¹ (γ>0.9954). The total time for seperation and determination was within 25 min.

Keywords: capillary zone electrophoresis bear bile bile acid

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- 倪坤仪;王建;陈健;郁建;屠树滋.反相高效液相色谱法测定牛黄类中成药中胆汁酸的含量[J]. 药学学报, 1994,29(8): 624-633

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