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GC测定中药丹酚酸A中有机溶剂残留量

Determination of the Residual Organic Solvents in Salvianolic Acid A by GC

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英文关键词: [salvianolic acid A](#) [organic solvents](#) [residual](#) [GC](#)

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中文摘要:

目的 建立测定中药丹酚酸A中有机溶剂乙醇和乙酸乙酯残留量的方法。方法 采用气相色谱法。色谱柱为HP-INNOWAX毛细管柱, 检测器为氢火焰离子化检测器, 柱温为程序升温, 载气为氮气。进样口温度为200 ℃, 检测器温度为250 ℃。结果 乙醇和乙酸乙酯浓度的线性范围分别为 $2.5 \sim 2500 \mu\text{g} \cdot \text{mL}^{-1}$ ($r=0.9953$) 和 $0.5 \sim 2500 \mu\text{g} \cdot \text{mL}^{-1}$ ($r=0.9981$); 平均回收率为100.97%和102.19% (RSD 5.0%); 检测限为 $0.84 \mu\text{g} \cdot \text{mL}^{-1}$ 和 $0.17 \mu\text{g} \cdot \text{mL}^{-1}$; 3批样品中2种有机溶剂残留量均符合中国药典要求。结论 本方法简单、准确、灵敏度高、重复性好, 可用于该药物中有机溶剂残留量的测定。

英文摘要:

OBJECTIVE To establish a method for the content determination of residual organic solvents in salvianolic acid A, which include alcohol and ethyl acetate. METHODS Headspace gas chromatography was adopted. Residual organic solvents were separated on HP-INNOWAX capillary column using temperature programming and nitrogen gas as carrier gas. The inlet temperature was 200 ℃. FID was used as detector with a temperature of 250 ℃. RESULTS The linear ranges of alcohol and ethyl acetate were $2.5 \sim 2500 \mu\text{g} \cdot \text{mL}^{-1}$ ($r=0.9953$) and $0.5 \sim 2500 \mu\text{g} \cdot \text{mL}^{-1}$ ($r=0.9981$), respectively, the average recoveries were 100.97% and 102.19%, respectively. RSD was both less than 5.0%. The detection limits were $0.84 \text{ mg} \cdot \text{mL}^{-1}$ and $0.17 \text{ mg} \cdot \text{mL}^{-1}$, respectively. The residual levels of two kinds of organic solvents in three batches of samples were in line with the standard stated in Chinese Pharmacopoeia. CONCLUSION The method is simple, accurate, sensitive and reproducible. It can be used for the determination of the residual organic solvents in salvianolic acid A.

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