



周娜. HPLC测定转化糖注射液中果糖、葡萄糖含量[J]. 中国现代应用药学, 2011, 28(13):1357-1359

HPLC测定转化糖注射液中果糖、葡萄糖含量

Determination of Fructose and Glucose in Invert Sugar Injection by HPLC

投稿时间: 2010/11/22

DOI:

中文关键词: 转化糖注射液 高效液相色谱法 果糖 葡萄糖 含量测定

英文关键词: invert sugar injection HPLC fructose glucose content determination

基金项目:

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中文摘要:

目的 建立转化糖注射液中果糖、葡萄糖的含量测定方法。**方法** 色谱柱为Hamilton HC-75H($305\text{ mm} \times 7.8\text{ mm}$, $9\text{ }\mu\text{m}$)，流动相为 $0.04\text{ mol} \cdot \text{L}^{-1}$ 磷酸，流速为 $0.5\text{ mL} \cdot \text{min}^{-1}$ ，检测波长为 200 nm ，柱温为 $50\text{ }^{\circ}\text{C}$ 。**结果** 果糖和葡萄糖的检测限分别为 0.28 , $0.52\text{ }\mu\text{g}$; 线性范围分别为 $1.27\sim 3.81\text{ mg} \cdot \text{mL}^{-1}$ ($r=0.999\ 4$)、 $1.26\sim 3.76\text{ mg} \cdot \text{mL}^{-1}$ ($r=0.999\ 2$)；加样回收率分别为 100.8% , 100.4% 。**结论** 本法适用于转化糖注射液中果糖、葡萄糖的含量测定。

英文摘要:

OBJECTIVE To establish a method for the determination of fructose and glucose in invert sugar injection. **METHODS** Hamilton HC-75H($305\text{ mm} \times 7.8\text{ mm}$, $9\text{ }\mu\text{m}$) was used. The mobile phase was $0.04\text{ mol} \cdot \text{L}^{-1}$ phosphoric acid at a flow rate of $0.5\text{ mL} \cdot \text{min}^{-1}$. The determination wavelength was 200 nm . The temperature of the column was $50\text{ }^{\circ}\text{C}$. **RESULTS** To fructose and glucose, the limit of detection was $0.28\text{ }\mu\text{g}$ and $0.52\text{ }\mu\text{g}$, the linear range was $1.27\sim 3.81\text{ mg} \cdot \text{mL}^{-1}$ ($r=0.999\ 4$) and $1.26\sim 3.76\text{ mg} \cdot \text{mL}^{-1}$ ($r=0.999\ 2$), the spiked recovery was 100.8% and 100.4% , respectively. **CONCLUSION** The method is suitable for the determination of fructose and glucose in invert sugar injection.

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