



### 药物中半胱氨酸的流动注射荧光测定方法研究

曹秋娥, 李菲

云南大学化学系 云南 昆明 650091

### Study on the flow injection method for the fluorescence determination of L-cysteine in the medicine injection

CAO Qiu-e, LI Fei

Department of Chemistry, Yunnan University, Kunming 650091, China

- 摘要
- 参考文献
- 相关文章

全文: PDF (735 KB) HTML ( KB) 输出: BibTeX | EndNote (RIS) 背景资料

**摘要** 在近中性介质及聚乙烯醇(PVA)存在下,半胱氨酸能熄灭一个新的荧光试剂5-(4-氯苯基)-8-苯磺酰氨基喹啉(CPBSQ)与Cu(II)络合体系的荧光的反应.基于此现象,本文建立了一个测定半胱氨酸的流动注射荧光熄灭方法.结果表明,在 $\lambda_{ex}/\lambda_{em}=327/368\text{nm}$ 处测定,方法的进样频率为 $64\text{h}^{-1}$ ,检测范围为 $0.05\sim 5.5\mu\text{g}\cdot\text{mL}^{-1}$ ,检出下限为 $0.01\mu\text{g}\cdot\text{mL}^{-1}$ ,对 $4.0\mu\text{g}\cdot\text{mL}^{-1}$ 半胱氨酸平行测定11次的相对标准偏差为1.52%.大量存在的常见金属离子、蛋白质及很多不带巯基的氨基酸不干扰测定.应用此方法测定了某些注射液剂中半胱氨酸的含量,结果满意.

**关键词:** 半胱氨酸 药物 荧光测定 流动注射分析

**Abstract:** A flow injection method for the fluorescence determination of L cysteine in the medicine injection has been developed based on the fluorescence quenches of the complex system between a new fluorescence reagent: 5-(4-chlorophenylazo)-8-benzenesulfonamidoquinoline (CPBSQ) and Cu(II) cysteine. The determination is carried out at  $\lambda_{ex}/\lambda_{em}=327/368\text{nm}$ . The sample frequency of the method is  $64\text{h}^{-1}$  with a linear range of  $0.05\sim 5.5\mu\text{g}\cdot\text{mL}^{-1}$  and a detection limit of  $0.01\mu\text{g}\cdot\text{mL}^{-1}$ . The relative standard deviation (RSD) for the determination of 11 samples of  $4.0\text{mg}\cdot\text{L}^{-1}$  cysteine is 1.52%. A lot of metal ions, protein and amino acid without-SH group do not interfere the determination. The proposed method has been applied to the determination of cysteine in the medicine injection with satisfactory results.

**Key words:** cysteine medicine spectrofluorimetry Flow injection analysis

收稿日期: 2003-03-27;

基金资助: 云南省教育厅自然科学基金资助项目(0012084).

引用本文:

曹秋娥,李菲. 药物中半胱氨酸的流动注射荧光测定方法研究[J]. 云南大学学报(自然科学版), 2003, (3): 266-268,276.

CAO Qiu-e, LI Fei. Study on the flow injection method for the fluorescence determination of L-cysteine in the medicine injection[J]. , 2003, (3): 266-268,276.

#### 服务

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ E-mail Alert
- ▶ RSS

#### 作者相关文章

- ▶ 曹秋娥
- ▶ 李菲

没有本文参考文献

没有找到本文相关文章

版权所有 © 《云南大学学报(自然科学版)》编辑部

编辑出版: 云南大学学报编辑部 (昆明市翠湖北路2号, 650091)

电话: 0871-5033829(传真) 5031498 5031662 E-mail: yndxxb@ynu.edu.cn yndxxb@163.com