

论文 变价态唐松草新碱—PVC膜离子选择电极的研制及解离常数的测定

马宛龙;顾学裘;苏德森

沈阳药学院

摘要:

本文研制了以四苯硼—唐松草新碱缔合物为电活性物质的变价态唐松草新碱—PVC膜电极。电极膜按电活性物质:PVC:DBP为1:8:8组成。该电极在pH 5.0~6.0, I =0.05的NaCl—HCl溶液中Nernst响应范围为 $1 \times 10^{-3} \sim 1 \times 10^{-5}$ mol/L。电极斜率为58.2 mV/logc。检测限为 2.5×10^{-6} mol/L。用直接电位法考察了TDH⁺, TDH₂CF⁺⁺共存时溶液pH和电极斜率S的关系。用S—pH关系,测定了25℃, I =0.05时的Ka₁值为 $(2.5 \pm 0.2) \times 10^{-4}$,用E—pH关系,测定了25℃, I =0.05时的Ka_s值为 $(8.1 \pm 0.9) \times 10^{-8}$ 。

关键词: 唐松草新碱 变价态离子选择电极 解离常数

PREPARATION OF THE VARIABLE-VALENCY THALIDASINE(TD) PVC MEMBRANE SELECTIVE ELECTRODE AND ITS APPLICATION IN THE pKa DETERMINATION OF THALIDASINE

WL Ma; XO Gu and DS Su

Abstract:

The construction and performance characteristics of a new variable-valency TD-PVC selective electrode was described. It is based on the TPB. TD ion-pair complex, which was used as electro-active material. The electrode membrane was composed of the complex, PVC and DBP in the ratio of 1:8:8 (w/w/w). The electrode showed Nernstian response from 10^{-3} to 10^{-5} mol/L in NaCl—HCl (I=0.05) solution over pH range of 5.0 to 6.0 with a slope of 58.2 mV/pC. The detection limit was found to be 2.5×10^{-5} mol/L. The electrode response was quite fast and stable, and the slopes of calibration curves were quite reproducible. It was observed that the E-pC relation can not be simply described by Nernstian equation over wide pH range. The slopes of electrode response and electrode potentials varied in concordance with pH value of the solution. By using the S-pH relation, the Ka₁ was found to be $(2.5 \pm 0.2) \times 10^{-4}$. (25℃, I=0.05). Accordingly, Ka_s was found to be $(8.1 \pm 0.9) \times 10^{-8}$ (25℃, I=0.05) by using E-pH relation.

Keywords: Variable-valency ion-selective electrode Dissociation constant Thalidasine

收稿日期 1987-01-05 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

参考文献:

本刊中的类似文章

- 1. 马宛龙;苏德森;顾学裘.唐松草新碱水溶液的氧化降解动力学研究[J]. 药学报, 1991,26(1): 59-63

文章评论 (请注意:本站实行文责自负, 请不要发表与学术无关的内容!评论内容不代表本站观点.)

扩展功能
本文信息
Supporting info
PDF(195KB)
[HTML全文]
参考文献
服务与反馈
把本文推荐给朋友
加入我的书架
加入引用管理器
引用本文
Email Alert
文章反馈
浏览反馈信息
本文关键词相关文章
唐松草新碱
变价态离子选择电极
解离常数
本文作者相关文章
马宛龙
顾学裘
苏德森
PubMed
Article by
Article by
Article by

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
-----	----------------------	------	----------------------

反馈
标题

验证码

7687