

论文

铋的比色测定法(二)用结晶紫及孔雀绿试剂之比色法

曹金鸿;卢涌泉;汤腾汉

摘要:

关键词:

STUDIES ON COLORIMETRIC DETERMINATION OF ANTIMONY (II)CRYSTAL VIOLET MALACHITE GREEN METHOD Tsho

KING-HUNG;Loo YUN-CHIENG TANG TENG-HAN

Abstract:

Rhodamine B and methyl violet have been considered as sensitive reagents for colorimetric determination of antimony. As crystal violet and malachite green also belong to the group of triphenylmethane dyes, containing $=N^+ < y^x$ group in their structure formulas, they might have therefore analogous reaction with antimony, forming coloured complexes. This paper deals with the study and development of crystal violet and malachite green as reagents for colorimetric analysis of antimony, and the results of our investigations are summarized below: 1. Pentavalent antimony in acid solution reacts with both crystal violet and malachite green, forming coloured complexes, which are soluble in benzene. 2. The benzene solution of the coloured complex formed from crystal violet shows maximum absorption at 602 m μ , while that of coloured complex formed from malachite green shows maximum absorption at 634 m μ . 3. Both coloured complexes are unstable in aqueous solution but fairly stable in benzene. 4. Each mole of crystal violet and malachite green requires one mole of antimony to form coloured complex. 5. Concentration of antimony in the range of 0.2—1.0 γ per ml can be determined by the use of crystal violet and malachite green colorimetrically with high accuracy. The proposed procedure may be summarized as follows: To 5 ml of sample (about 0.015 mg of Sb) in a measuring cylinder add 2.5 ml of 10N hydrochloric acid and 0.5 ml of 1N NaNO₂, shake and allow to stand for 2 minutes. Add 0.7 ml of urea solution and shake for 1 minute, then dilute with water to 20 ml. Transfer the solution into separating funnel, add 20 ml of benzene and 0.5 ml of 0.2% aqueous solution of reagent and shake immediately for 5 minutes. Draw off the benzene solution and determine its transmittance with photoelectric colorimeter.

Keywords:

收稿日期 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

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(407KB)
- ▶ [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

本文作者相关文章

- ▶ 曹金鸿
- ▶ 卢涌泉
- ▶ 汤腾汉

PubMed

- ▶ Article by
- ▶ Article by
- ▶ Article by

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
反馈标题	<input type="text"/>	验证码	<input type="text"/> 8562