分光光度法同时测定两个干扰组份的研究　**I.**
多波长数据线性回归法及其应用于同时测定微量锰和锌的探讨

王保宁,李占双

中国科学院长春应用化学研究所

收稿日期　修回日期　网络版发布日期　接受日期

摘要
关键词　分光光度法　锌　计算　锰　回归分析　线性回归

分类号　O651

Investigations on simultaneous spectrophotometric determination of two-interfering-component systems i. The linear regression method of multi-wavelength data and study on application to the simultaneous determination of microamounts of manganese and zinc

WANG BAONING,LI ZHANSHUANG

Abstract　In this paper, a linear regression method of multiwavelength data is proposed. The method, based on the difference of molar absorptivity between two coloured chelates at murti-wavelengths, can be applied to simultaneous spectrophotometric determination of two-interfering-component systems in the visible region. As an example, the availability as well as the optimum condition for simultaneous determination of Mn and Zn with 5-Br-PADAP in the presence of nonionic surfactant Triton X-100 have been studied. Measure the absorbance at 15 wavelengths over the range of 540-584 nm and treat the data with the suggested method, the linear correlation coefficients (γ) are found to be 0.998 in the synthetic mixtures containing microamounts of Mn and Zn with the concentration ratio from 1:10 to 10:1. The recoveries of both elements are 95-120% with the relative standard deviations (N=5) less than 17%. the method has been successfully used for direct determination of Mn and Zn in tap water. The new method proposed in this work is simple, fast and can be used for the analysis of two-interfering-component systems.

Key words　SPECTROPHOTOMETRY　ZINC　CALCULATION　MANGANESE　REGRESSION ANALYSIS LINEAR REGRESSION

DOI:

通讯作者

扩展功能

本文信息

▸ Supporting info
▸ PDF(0KB)
▸ [HTML全文](0KB)
▸ 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
▸ 复制索引
▸ Email Alert
▸ 文章反馈
▸ 浏览反馈信息

相关信息

▸ 本刊中 包含"分光光度法"的相关文章
▸ 本文作者相关文章
·　　王保宁
·　　李占双