

分光光度法同时测定无机多组分体系的研究III: 微量钨, 钼, 钛的测定

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摘要

本文从配合物吸收光谱行为及矩阵运算角度分别探讨了CPA矩阵法AKC矩阵法中波长选择对分析结果误差的影响.

在前人有关钨, 钼, 钛单个元素光度测定研究的基础上, 确定了适宜于钨, 钼, 钛一苯基荧光酮-

溴代十六烷基三甲铵三元配合物同时光度测定的最佳条件, 拟定了不经分离直接光度测定钨, 钼, 钛的方法.

关键词 [分光光度法](#) [多组分体系](#) [氧杂蒽酮 P](#) [矩阵法分析](#) [微量分析](#) [计算机应用](#) [钛](#) [三甲基烷基铵](#) [苯 P](#) [钼](#) [溴化物](#) [光谱分析](#) [波长](#) [钨](#) [同时测定](#) [三元酚](#)

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### Studied on the simultaneous spectrophotometric determination of inorganic multicomponent systems III: Determination of microamounts of tungsten, molybdenum and titanium

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**Abstract** The absorption spectra of W-, Mo-, and Ti-phenylfluorone-cetyltrimethylammonium bromide complexes and the optimum conditions for the simultaneous spectrophotometric determination of microamounts of W, Mo, and Ti were studied. In order to examine the effect of the errors of calibration matrix on the anal. results, the approach of selecting the anal. wavelengths was investigated and the comparison of computation results between AKC method (the matrix representation of Beer-Lambert's law) and CPA method (the inverse expression of Beer-Lambert's law) at different wavelength positions was made with their prediction errors. It showed that under experimental conditions, both the accuracy and the precision of the AKC method using 10 wavelengths for determination were better than those of CPA method. The standard mixtures containing microamounts of W, Mo, and Ti in different concentration ratio were determined with satisfactory results. The present method constitutes a simple and fast method for the simultaneous determination of microamount of W, Mo, and Ti.

**Key words** [SPECTROPHOTOMETRY](#) [MULTICOMPONENT SYSTEM](#) [XANTHENONE P](#) [MATRIX METHOD](#) [MICRO ANALYSIS](#) [COMPUTER APPLICATIONS](#) [TITANIUM](#) [TRIMETHYLALKYLAMMONIUM](#) [BENZENE P](#) [MOLYBDENUM](#) [BROMIDE](#) [SPECTROGRAPHIC ANALYSIS](#) [WAVE LENGTH](#) [TUNGSTEN](#) [SIMULTANEOUS DETERMINATIONS](#) [TRIHYDRIC PHENOL](#)

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