

## 钯-柠檬黄-表面活性剂荧光光度法的研究与应用

文志明,王怀公

兰州大学化学系

收稿日期 修回日期 网络版发布日期 接受日期

**摘要** 本文研究了在各种类型的表面活性剂存在下,钯与柠檬黄的胶束增敏荧光反应,测定了金属荧光配合物的形成条件、组成、量子产率、表观稳定常数和激发波长处的摩尔吸光系数,对胶束增敏作用机理进行了初步探讨.确定了测定钯的最佳条件,钯在0.1-8.0 $\mu\text{g}/25\text{mL}$ 范围内与荧光强度呈线性关系,检出下限达 $8.0 \times 10^{-4} \mu\text{g}/\text{mL}$ .

本文方法可不经分离直接快速地测定贵金属矿样中痕量钯,结果令人满意。

**关键词** [表面活性剂](#) [反应机理](#) [钯](#) [钯](#) [荧光分光光度法](#) [酒石黄](#) [增敏作用](#) [溴化十六烷基三甲铵](#)

分类号 [O651](#) [TG46](#)

## Fluorimetric reaction of palladium (II) with tartrazine and surfactants and its application

WEN ZHIMING,WANG HUAIGONG

**Abstract** The sensitization of various surfactants on the fluorometric reaction of Pd(II) and food color Tartrazine (TTZ) was compared. Cetyltrimethylammonium bromide (CTMAB) is the best one. The mechanism of sensitization of different surfactants for fluorometric reaction of the 1:2 Pd(II)-TTZ complex is discussed. The role of the cationic surfactants in the micellar fluorescent reaction was due to the ion-assocn. interactions and the protective actions of the micelles. The optimum conditions of fluorometric determination of Pd(II) was established. The sensitivity of the reaction increases 6-fold in the presence of CTMAB. The limit of determination is  $8.0 \times 10^{-4} \text{ mg}/\text{mL}$ . Calibration curve is linear for 0.1-8.0 Pd mg/25 mL. Pd was determine in slags and Pd concs. with satisfactory results.

**Key words** [SURFACTANTS](#) [REACTION MECHANISM](#) [PALLADIUM](#) [PALLADIUM](#) [FLUOROSPECTROPHOTOMETRY](#) [TARTRAZINE](#) [SENSITIZING](#)

DOI:

通讯作者

扩展功能

### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(402KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [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“表面活性剂”的相关文章](#)
- ▶ [本文作者相关文章](#)

- [文志明](#)
- [王怀公](#)