

铝试剂的荧光光谱与荧光量子产率

魏永巨,康志敏,戚秀菊,张玉平,刘翠格

河北师范大学化学系实验中心;河北科学大学理学院;石家庄师范专科学校化学系

收稿日期 修回日期 网络版发布日期 接受日期

摘要 首次研究了铝试剂的荧光光谱和荧光量子产率,发现pH3至pH12条件下,用紫外光照射铝试剂溶液可以产生荧光,最大激发波长和最大发射波长分别为297nm和409nm,荧光强度与铝试剂浓度之间存在良好的线性关系,线性范围为0.01~3μg/mL,检测下限为0.01μg/mL,以硫酸奎宁为参比,测得铝试剂的荧光量子产率为0.16。

关键词 [铝试剂](#) [荧光分光光度法](#) [奎宁](#) [荧光量子产率](#)

分类号 [064](#)

Fluorescence spectra and fluorescence quantum yield of aurintricarboxylic acid

Wei Yongju, Kang Zhimin, Qi Xiuju, Zhang Yuping, Liu Cuige

Abstract Fluorescence spectra and fluorescence quantum yield of aurintricarboxylic acid (TAT) were studied from the first time. It was found that TAT solution with pH 3~12 produced fluorescence when irradiated with ultraviolet rays. The maximum excitation wavelength and the maximum emission wavelength are 297 nm and 409nm, respectively. An excellent linear relationship between fluorescence intensity and ATA concentration was observed. The linear range is 0.01~3μg/mL, and the detection limit is 0.01μg/mL. Using quinine bisulphate as a reference, fluorescence quantum yield of ATA was measured to be 0.16.

Key words [ALUMINON](#) [FLUOROSPECTROPHOTOMETRY](#) [QUININE](#)

DOI:

通讯作者

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(OKB\)](#)

▶ [\[HTML全文\]\(OKB\)](#)

▶ [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“铝试剂”的
相关文章](#)

▶ 本文作者相关文章

- [魏永巨](#)
- [康志敏](#)
- [戚秀菊](#)
- [张玉平](#)
- [刘翠格](#)