عنوان مقاله:

Determination of Tetracycline by Rhodamine B-Modified gold nanoparticles

محل انتشار:

اولین همایش ملی تکنولوژی های نوین در شیمی و پتروشیمی (سال: 1393)

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نویسنده:

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خلاصه مقاله:

In this study,a rapid, economical and highly sensitive method is described for determination of trace amounts of tetracycline based on the fluorescence resonance energy transfer(FRET) between AuNPs and Rhodamine B (RB) ,in which RB Acts as the donor and Au NPs as the acceptor.The reaction was monitored spectrofluorometrically by measuring the increase in fluorescence of RB at 572 nm after 4min of mixing the reagents in tris buffer solution (pH=6.5).Various chemical (such as the type of buffer, the effect of acidity and reagents concentration) and reaction time were studied and were optimized. By using the recommended procedure and under optimum conditions ,the calibration graphs were linear from 0.01 to 10 of tetracycline. Also the interfering effects of various chemical species were studied .The proposed method was applied to the determination of Tetracycline milk and various water samples

کلمات کلیدی:

Oxytetracycline,Rhodamine B,gold nanoparticles,fluorometry