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Photochemically-Induced Fluorescence Properties and Determination of Flufenamic Acid, a Non-Steroidal Anti-Inflammatory Drug, in Urine and Pharmaceutical Preparation

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Abstract: The photochemically-induced fluorescence (PIF) properties of flufenamic acid (FF), a non-steroidal anti-inflammatory drug (NSAID) were investigated in acidic (pH 1.0) aqueous solutions at room temperature. An optimization procedure, including the effects of UV irradiation time, pH and solvent, was established for the determination of FF. A linear logarithmic calibration plot was obtained over a wide concentration range of four orders of magnitude. A low limit of detection of 0.14 ng/mL was found. The relative standard deviation (RSD) was 6.6%. The PIF method was applied to the quantitative analysis of FF in urine and in a pharmaceutical preparation with satisfactory recovery values.

Key Words: Photochemically-induced fluorescence; flufenamic acid; urine analysis; pharmaceutical preparation.

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