A concept of dual optical detection using three light emitting diodes.

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In this paper a concept of very simple measurement system dedicated for simultaneous photometric and fluorometric detection is presented. Only three ordinary unmodified light emitting diodes (LEDs) can be applied in this analytical device: one of them is used in the conventional way as a source of nearly monochromatic light inducing fluorescence, whereas two others are applied as photometric and fluorometric detectors of light. In this study quinine is chosen as a model analyte. The reported device enables simultaneous detection of this analyte in the micromolar range of concentration. The practical utility of prototype dual detector for complex sample analysis is illustrated by its application for determination of quinine in tonic water samples.

Słowa kluczowe

Light emitting diodes, Fluorometry, Photometry, Quinine

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