Fluorimetric detector and sensor for flow analysis made of light emitting diodes.

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Streszczenie

Two compact optoelectronic fluorimetric devices operating according to the paired-emitter-detector-diode concept have been developed. The fluorimetric detector, fabricated of three light emitting diodes only, has been applied for the development of fluorimetric optosensor by further integration with sensing solid phase. In these investigations as a model analyte and as a model sensing layer useful for solid phase spectrometry, riboflavin and C18-silica have been chosen, respectively. Both developed analytical devices have been applied for non-stationary fluorimetric measurements performed under conditions of flow injection analysis. The presented flow-through detector and sensor operating under given flow conditions offer riboflavin determination in mg L^{-1} and μg L^{-1} ranges of concentration, respectively.

Słowa kluczowe

Fluorimetry, Detector, Sensor, Solid phase spectrometry, Paired emitter detector diode, Flow analysis, Riboflavin

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