



Simultaneous determination of lithium, sodium and potassium in blood serum by flame photometric flow-injection analysis

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Abstract

A simultaneous flow-injection analysis (FIA) manifold that could analyse three ions from a single injection was designed, constructed, calibrated and used successfully to analyse Li^+ , Na^+ and K^+ . This FIA method was 10 times faster than the batch technique. The sample volume required was a fraction of about 1/110 to 1/75 that of the batch technique. The outputs were quite reproducible and calibration curves were linear. Results obtained for artificial sera compared favourably with the actual known concentrations of ions and results obtained in the analysis of eight natural human blood sera compared well with those obtained by the traditional batch technique.

Keywords

Flow-injection analysis; Blood serum; Lithium; Sodium; Potassium