Application of a standard-free method to quantitative analysis of cerebrospinal fluid (CSF) samples

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Abstract

A standard-free method was applied to untreated cerebrospinal fluid samples. The total yield of continuous x-rays between 7.2 and 10.4 keV was used for a quantitative analysis, and calcium was designated as the index element. This method requires neither a large amount of the sample nor the internal standard. As the results, values of concentration of calcium agree well with the values obtained by the internal standard method within an error of 5%. The results of quantitative analysis of 15 elements are shown for 19 normal samples and also for some abnormal samples containing excess amount of red corpuscles or white corpuscles.