APPLICATION OF ATOMIC ABSORPTION SPECTROMETRY IN TRACE ANALYSIS OF CLINICAL SAMPLES (BLOOD)

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ABSTRACT Atomic absorption spectrometry (AAS) is an instrumental analytical method dedicated for the determination of trace amounts of elements in samples of different nature, including clinical trials. It belongs to the optical spectroscopic methods and examines the impact of UV and VIS radiation on atoms. This method utilizes an atomic absorption phenomenon.

In the study, correlations between the number of elements in the blood serum and red blood cells are described. The content of elements was determined using the flame and flameless atomic absorption spectrometry. The correlation analysis was performed with respect to such elements as calcium (Ca), magnesium (Mg), zinc (Zn), copper (Cu), iron (Fe), aluminum (Al), lead (Pb), cadmium (Cd), and chromium (Cr).

Keywords: atomic absorption spectrometry, elements, serum, red blood cells, correlation analysis