

Inorganic Sulphate play important role in various metabolic pathways. The aim of the work was to assess the possibility of inorganic sulphate determination in patients with severe kidney diseases undergoing hemodialysis. Serum sulphate levels were determined in 68 patients (31 men, mean age 67, range 31 – 86 and 37 women mean age 71, range 44 – 86) before and after hemodialysis. Two turbidimetric methods Quantichrom TM Sulfate Assay Kit and BGR gelatine method were used for determination. Both methods were performed separately in group of 34 patients. Results were as follows: Mean serum sulphate levels in patients before hemodialysis are significantly elevated than the levels after hemodialysis ($p < 0.0001$, non parametric t-test, $\alpha = 0.05$). BGR gelatine method show less significant differences in sulphate levels before and after hemodialysis than the Quantichrome Assay method. ($p = 0.037$ vs. $p < 0.001$, non parametric t-test, $\alpha = 0.05$). This fact could be explained by the significant role of interferences in BGR gelatine method. We confirm the relevance of both metod in inorganic sulphate determination. BGR gelatine method is more affected by interference, than the QuantiChrome Assay method.