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BOOK OF ABSTRACTS

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One of the most important tasks in Analytical chemistry is the efficient and express microquantity determination of toxic metals and biologically active organic materials in different objects of environment, raw materials and products of food technology and biotechnology.

It is impossible to resolve these problems without the use of contemporary analytical inspection methods.

Among the many, such combination method, which allows to control the sorption concentration and the subsequent photometrical determination in solid phase, as solid-phase spectrophotometry (SPS), proves to be effective in the analysis.

The results of the complexation study of Cu(II), Pb(II), Zn(II), Fe(II), Hg(II), Cd(II), Sn(IV), Zr(IV), Ti(IV) with arsenazo III, sulfonazo SPADNS, Eriochrome T, Acid Chrome Dark Blue, Xylenol Orange, Methyl Thymol Blue, Pyrocatechol Violet, Chrome Azurol S, Eriochrome Cyanine R, Basic Blue K, Methyl Violet, Brilliant Green, Rhodamine C, Astraphoxin in solid phase. The obtained data are used for the working out of a new method of metal determination.

Ultrasound Sample Preparation method was used for the analysis of food products.

Solid-phase basic dyes are also used for the study of their interaction with medical products: nicotinic, aminocaproic, acetylsalicylic and ascorbic acid and for the establishing of the new methods of SPS determination in medicinal products.

Solid-phase acidic dyes are also used in the study of the ternary systems with pyrazolone derivatives. In addition, the colorless complex of investigated metals with pyrazolone derivatives has been studied by means of the metal-indicator method.

The obtained results demonstrated that in a number of cases the solid phase multiligand systems, and in other cases - pyrazolone derivatives improve the extraction of metal from the analyzable solution, but at that, multiligand systems are not produced in solid phase.