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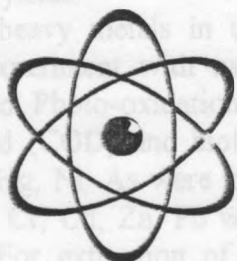
PROGRAMME

AND

BOOK OF ABSTRACTS



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We had determined concentrations of some trace metals results, which are lower than expected values.

SPECIATION STUDIES OF SOME ELEMENTS IN TEXTILE WASTEWATER AFTER PHOTO-OXIDATION TREATMENT

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Textile wastewaters which containing azo dyes cannot be treatment directly by biological treatment. Toxicity depends on its chemical form, which called speciation. The effluent characteristics are largely determined by fiber type and by machinery employed. Organic components (dye staff, fats, waxes, etc.), inorganic salts (mainly sodium), soap, detergents are coming from treatment process, but a lot of unexpectable impurities are coming from reagents. Because of toxic effects of Cr(III), Cr(VI), Cd, Zn, Pb, Hg, Ni, and its different forms might be reduced of biological treatment yields.

In this work speciation analysis of heavy metals in textile wastewater after photo-oxidation treatment is investigated. Model experiment with two types of azo dyes used for cotton, viskon and cellulose dyeing were realized. Photo-oxidation conditions were chosen, giving the lower values for chemical oxygen demand (COD) and biological oxygen demand (BOD). The addition of Cr(III), Cr(VI), Cd, Zn, Pb, Hg, Ni, As were made in dye staff solution before photo-oxidation. The total content of Ni, Cu, Cr, Cd, Zn, Pb were determined by ETAAS and flame AAS) after Microwave pretreatment. For extraction of organic bounded elements the dynamic sorption on C₁₆ sorbent (cross-linked silica base) was used. The fraction of organic bounded and inorganic forms of toxic metals solution before and after photo-oxidation treatment was established.

FLOTATION CONCENTRATION OF AMINES ATTACHED TO ANALYSIS OF WATER SOLUTIONS

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Amines reckon among most dangerous matters, contaminating girding environment in different amounts of them display in atmosphere, air of industrial zones and enterprises, in natural and sewage waters, ground deposits, soils, nourishment products. In this tie is intelligible analysts interest, displaying in big number of publications, sacred to determination problems, division, concentrating and authentication of aminocompounds.

In given report come into question the researches results, directed to study of method possibilities of flotation concentrating of alifatikamines attached to analysis of natural and sewage waters.

Concentrating of by flotation method on effectiveness comparable with extraction and, as think the specialists, gives the concentrating (K) coefficient indexes on 1–1,5 of order beneath, than attached to use for these aims of ionexchanges method ($K = 10^3$). Such relatively low concentrating index conditioned that, as result of flotation will make abundant spume, retaining far of processed solution. Process effectiveness can be raised thanks to application of flotation variant with bearer, reputed in foreign literature under term "adsorbing colloid flotation" or "adsorbing particle flotation". A Process consists in preliminary seizure of colligend (extracted component) by bearer (particles thanks to adsorption, to absorption, and etc.) with consequent flotation "loaded" particles. By bearer can serve ionexchange resins, absorbent carbon, made in sediments solution and other. As result such flotations on solution surface will make film of sublat (practically waterless product), containing an extracted component.

In given work in bearer quality made thindisperse use of paraffin, a particles dimension of which put together $5 \cdot 10^{-5}$ cm. Studied process thermodynamics adsorption of chlorides dodecyl-, hexadecyl-, octadecylamines thindispersed by paraffin – been accorded process dependence parameters from temperature, hydrogen ions concentration and adsorption kinetics of amines by paraffin, finding oneself power more advantageous by that in adsorption case of amines on phases part border solution – air vesicle. Are definite the conditions of flotation apportionment of amines, adsorbed on paraffin. Established, that on aggregate of metrological descriptions concentrating method of amines by flotation with bearer will confront with ionexchanges, and with simplicity calculation, availability, universality and expressive offered method more preferable.

BIOSORPTION OF HEAVY METAL FROM AQUEOUS SOLUTION BY DRIED LICHENS

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Key words: Biosorption, heavy metal, lichen

Biosorption of Cr (III), Cu (II) and Zn (II) from dilute aqueous solutions by biomass of the lichens *Usnea florida*, *Dermatocrpon miniatum*, *Dermatocrpon intestiniforme* and *Pseudeuernia furfuracea* were investigated. The amount of metal bound was increased with the initial metal concentration. The uptake of metals was found to be rapid and strongly pH dependent for all of metals studied. Although metal binding was not seen at pH 2, binding was increased rapidly with increasing pH and reached a maximum above pH 4. At optimum pH, the degree of binding Cr (III) and Zn (II) was over% 90 and Cu (II) over% 60 for all of studied lichen species.