...s of series 1 are less active in the same conditions: value of $K_d$ is equaled 2-3•10$^{-5}$ s$^{-1}$. However, activity sharply improves under UV illumination: rate constant of dye degradation increases 3-5 ...

Under mechanocatalytic degradation, $K_d$ is maximal and achieves 3•10$^{-4}$ s$^{-1}$ but decreases after ...minary milling of initial $SnO(OH)_2$.

Thus, tin (IV) oxide and oxo-hydroxide modification by means of mechanochemical and ...wave treatments allows to regulate of porous structure parameters and improve their photocatalytic ...erties.

...ences

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## THE ROLE OF EXTRACTION AND ADSORPTION ALKYLCARBOXYLATES LANTHANUM AT THE SURFACE DROPS OF EXTRACTANT IN PROCESS OF MICROFLOTATION-EXTRACTION ISOLATION FROM SOLUTIONS

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For information about the patterns of extraction and adsorption at the interface liquid-liquid ...ylcarboxylates rare earth elements (REE) are critical to a decision on the feasibility and advisability of ...oflotation-extraction isolations REE from dilute solutions of their salts. The flotation-extraction - a ...od of concentrating the solutes which successfully combines the advantages of flotation and ...action [1]. The microflotation-extraction essence lies in the extraction of recoverable component ...y dispersed droplets of extractant and subsequent recovery of the extractant by flotation.

In such systems with a highly dispersed developed surface interface liquid-liqui dramatically increases the role and its influence on the distribution coefficient and the microflotation-extraction isolation solutes.

In this work the results of the experiments carried up with the a purpose of finding-out o adsorption in process of lanthanum microflotation-extraction isolation from diluted ((2-7)·1 solutions of lanthanum nitrate with the help of fine-emulsified fatty acids – caprylic ($C_7H$ capric ($C_9H_{19}COOH$), lauric ($C_{11}H_{23}COOH$) and myristic ($C_{13}H_{27}COOH$) are submitted.

Methods of experiments on adsorption of lanthanum ions surface drops capric, lauric and acids and their extraction of these acids include ultrasonic dispersing acid in solution La(N temperature above the melting point acids. Dispersing acids (1.5 - 2 g) in solutions of $La(NO_3)_3$ was carried out using an ultrasonic disperser UZDN-2T with an operating frequency of strictur for 10 minutes. After dispersing the emulsion was cooled to room temperature (18 - 20 $^0$C cooling, the dispersed phase of the emulsions in a solid state, and the emulsion was transform fine suspension. Microscopic study of the suspension revealed that particle capric, lauric and acids have a ball shape. The radius of the particles of all acids turned out to be almost the same a $4.25 \cdot 10^{-6}$ m.

Flotation treatment of the resulting suspensions was performed on an apparatus for flot bubbling through the solution, a porous material dispersed air.

The effectiveness microflotation-extraction judged by the degree of release of ions from s of lanthanum $\alpha = ((C_0 - C)/C_0) \cdot 100\%$, where $C_0$ and C - lanthanum concentration in the before and after microflotation-extraction.

The extraction efficiency was evaluated by the values of the distribution coefficie $K_p = C_o / C_{aq}$, where $C_o$ and $C_{aq}$ - total (analytical) concentration in the equilibrium of the org aqueous phases, respectively.

The content (amount) of carboxyl groups on the surface of the beads of fatty acids were det by a conductometric titration method (method of Maron) [2] 50 ml of a suspension of 0.01 M solution.

Comparative analysis of microflotation-extraction and extraction lanthanum using finely d caprylic acid (Fig. 1) showed that the degree microflotation-extraction isolation under the expe conditions (pH 6, the extraction (phase contact) and microflotation-extraction 10 min) significantl - 30%) higher degree of extraction of lanthanum.

The observed phenomenon can be explained [3] firstly, the fact that the distribution co between the lanthanum aqueous and organic phases ($K''_p = C_o^{La^{3+}} / C_{aq}^{La^{3+}}$) is noticeably lower (Fig.

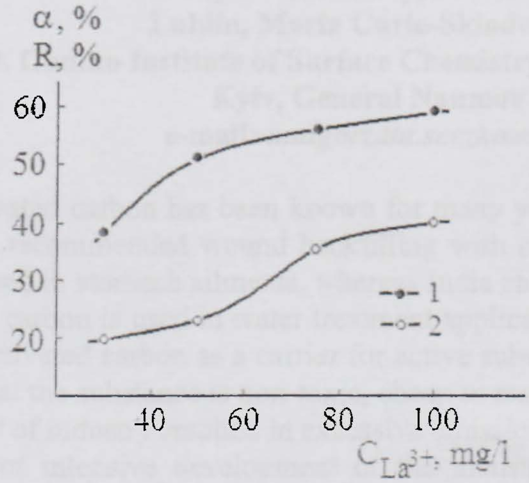


Fig. 1. Influence of concentration (C) lanthanum io solution of lanthanum nitrate on a degree (α, R) c microflotation-extraction isolation (1) and extraction ( the help of caprylic acid. Value pH mediuim 6. T contact of phases (extraction) and microflotation-ext 10 min.

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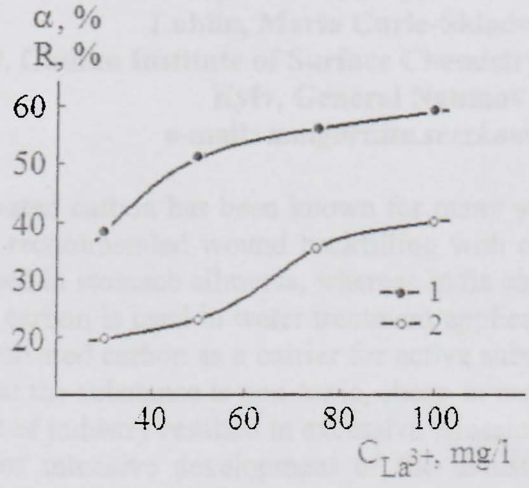


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distribution coefficient between the aqueous phase and the surface (adsorption) extractant layer ($K_p' = C_s^{La^{3+}} / C_{aq}^{La^{3+}}$) and water secondly the fact that the total surface of the droplets of extractant ...ed when ultrasonic dispersion is much greater than the total surface of the droplets of extractant ...ed during mechanical dispersion. We conclude that in the highly dispersed developed systems with interface liquid-liquid adsorption dramatically increases the role and its influence on the the ...ribution coefficient and the degree of microflotation-extraction isolation solutes.

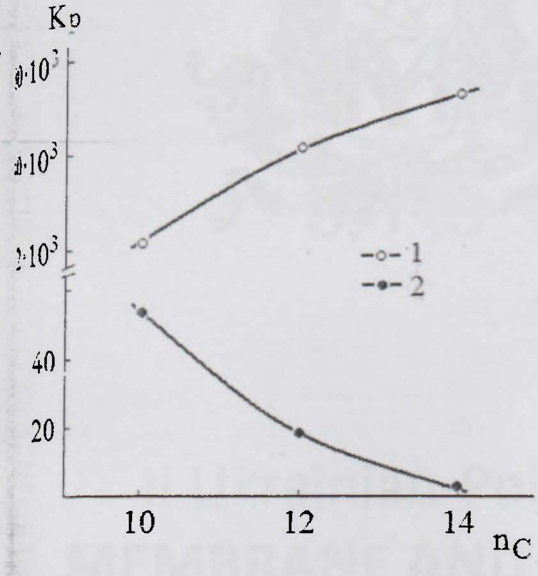


Fig. 2. Influence of carbon atoms number ($n_c$) in a molecule of fatty acid on value of the distribution coefficient ($K_p$) of lanthanum between aqueous phase and surface layer $K_p'$ (1) or aqueous and organic phases $K_p''$ (2) at ultrasonic dispergation of fatty acids.

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## PREPARATION OF ACTIVATED CARBONS FROM AGRICULTURAL WASTES

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Activated carbon has been known for many years. Its original application was in medicine, when ...pocrates recommended wound backfilling with charcoal for faster healing,. In the fifteenth century ...it was used in stomach ailments, whereas India charcoal was applied to purification of drinking water. ...this day, carbon is used in water treatment applications. In addition, many literature data indicate that ...use of activated carbon as a carrier for active substances. A special advantage of the activated carbon ...e fact that the substance is non-toxic. cheap to manufacture and easy to dispose of after use. Intensive ...elopment of industry resulted in excessive emissions of waste.

...the era of intensive development of the industry worldwide serious concern becomes excessive ...ssion of various types of wastes. Currently, steps are taken to their reused. Residue also includes