

KINETIC PROPERTIES OF SULFUR AND NITROGEN-CONTAINING ANIONITE

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The object of study is the effective anion exchange resin based on thiourea, epichlorohydrin and melamine^{1,2} and its kinetics of exchange capacity for copper and nickel ions. In the study of the kinetics of ion exchange, a limited volume method and an installation were used, which includes a thermostat and a reactor with a stirrer with a capacity of 1 liter. A preprepared solution was placed in the reactor in an amount of 1 l with a concentration of components of 0.2 mol / l. With a constant grain size of the swollen ion exchanger, the temperature in the experiments varied: 25°C, 45°C, 60°C. 1 g of swollen ion exchanger was placed in the solution. The analysis of all solutions for the content of elements was carried out by trilonometric and potentiometric titration. For comparison, the kinetic properties of the industrial polymerization anion exchanger EDE-10P were investigated. The total exchange capacities of these anion exchangers in the OH - form were determined according to a 0.1N CuSO₄ solution: EDE-10P– 3.2 mg eq / g, TEM - 4.6 mg eq / g

The calculated value of the copper diffusion coefficient after the 7-hour phase contact is $6.3 \cdot 10^{-8}$ for the TEM anion exchanger, and $5.6 \cdot 10^{-8}$ for the EDE-10P anion exchanger. The research results show that the obtained anion exchange resin by its sorption and kinetic properties is not inferior to the industrial anion exchange resin EDE-10P.

Literature

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