Influence of some chemical substance on the process of ionic exchange on synthetic solutions with heavy metals ions

Carmen-Luminiţa VRABIE^{a*} and Ion BALASANIAN^b

Waste Water Treatment Laboratory, Compania Apa R.A. Braşov, 13 Vlad Ţepeş Str, 500092 Braşov, Romania
Faculty of Industrial Chemistry, "Gh. Asachi" Technical University of Iaşi, 71 A Acad. D. Mangeron Av., 700050 Iaşi, Romania

Abstract On the paper is described an experimental work regarding the influence of dissolved organic substance and calcium and magnesium ions on the process of iron, zinc and nickel ions retention, in specified conditions (a = 0,5 \pm 0,001 g dry resin ; F_v = 4,16 cm³/min.; pH = 7; T = 20°C). It has been used a Purolite C 100 highly acid ion exchanger, that, even it is not the most suitable resin for treatment of waste water contaminated with iron, zinc and nickel, represents a price-quality compromise in the mentioned process. The purifying ratio was used as indicator in order to estimate the efficiency of the ionic exchange process.

Keywords: ions exchanger, ionic exchange, iron, zinc and nickel.