

Kowalska, I. Regeneration of Ion-exchange Resins Used for the Separation of Anionic Surfactants from Aqueous Solutions. *Ochrona Srodowiska* 2012, Vol. 34, No. 2, pp. 39–42.

Abstract: Effectiveness of regeneration was determined for macroporous and gel ion-exchange resins (MIEX[®], A100, A200, A400 and SBW) saturated with an anionic surfactant in a continuous system. Use was made of a sodium dodecylbenzenesulfonate (SDBS) model solution at a concentration of 400 g/m³. Regeneration was carried out in a column and in a batch system with 12% NaCl solution (MIEX[®]) and 4% NaOH solution (A100, A200, A400 and SBW). The study produced the following findings. The extent of regeneration was influenced by the type of the resin applied. The level of SDBS elution decreased with decreasing grain size and degree of polymer cross-linking in the following order: MIEX[®]>A100>SBW>A200>A400. Regardless of whether the regeneration process was carried out in a column or a batch system, elution of SDBS was much the same, with approximately 50% greater consumption of regenerative solutions for the batch system.

Keywords: Anionic surfactant, anion-exchange resin, regeneration.