

**Perkowski, J., Wronski, P., Goralski, J., Szadkowska-Nicze, M. Adsorption of Sodium Dodecylbenzenesulfonate (SDBS) onto Silica Gel from Aqueous Solutions. *Ochrona Srodowiska* 2012, Vol. 34, No. 3, pp. 45–50.**

**Abstract:** Adsorption of the anionic surfactant SDBS (sodium dodecylbenzenesulfonate) onto fine-grained (0.2–0.5 mm, Merck) and coarse-grained (2–5 mm, Chempur) silica gels was investigated under static (jar test) and dynamic (pipe reactor) conditions. The kinetics of the adsorption process was established, and the influence of both silica gel mass and SDBS concentration on the extent of adsorption was analyzed. SDBS adsorption onto 2–5 mm silica gel granules was found to be noticeably lower when conducted under static than under dynamic conditions. The results of SDBS adsorption onto 0.2–0.5 mm silica gel granules were compared with relevant literature data by analyzing excess isotherms of adsorption from two-component solutions.

**Keywords:** Adsorption, sodium dodecylbenzenesulfonate (SDBS), silica, critical micelle concentration, water treatment, sewage treatment.