

Batch sorption experiments have been carried out to remove natural uranium (NORM) from water obtained together with crude oil and natural gas, using Algerian bentonites. The effect of some important factors such as S/L ratio, pH, initial concentration, particle size was evaluated and a kinetic study performed. The value of the distribution coefficient ( $K_d$ ) at equilibrium for natural uranium varied from 30 to 600  $\text{cm}^3\cdot\text{g}^{-1}$  and 50 to 1100  $\text{cm}^3\cdot\text{g}^{-1}$  (~10% margin error) using natural bentonite and drilling bentonite, respectively. The isotherms showed that the data are consistent with both Freundlich and Langmuir models