Highlights

- Adsorption capacity BZ-3 onto lipophilic organosilicates (OS₇) was studied.
- OS₇ adsorption capacity was compared to the Laponite and montmorillonite adsorption.
- The effects of the solvent, pH, temperature, and contact time were studied.
- OS₇ - montmorillonite fitted with the Langmuir, Laponite with the Freundlich model.