

Adsorption behavior of organoarsenic species DMA, DMMTA and DMDTA on clay mineral surfaces

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Reaction mechanism of organoarsenic species on surfaces

Removal of organoarsenic species by clay minerals, DMA, DMMTA and DMDTA shows strong dependency on pH as well as different clay surfaces Kaolinite and Montmorillonite.

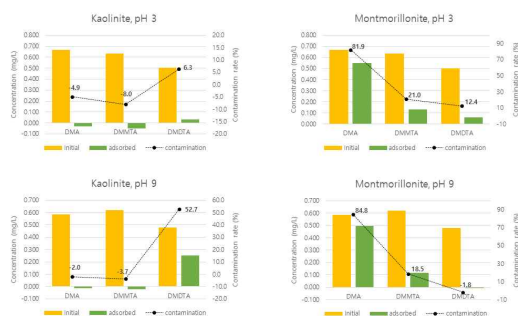


Figure 1. Adsorption experiment of DMMTA and DMDTA on Kaolinite and Montmorillonite at pH 3 and pH 9.

Discussion of Results

DMA and DMMTA did not appear to be contaminated with Kaolinite at pH 3 and 9, but the possibility of partial contamination of DMDTA at pH 9 was confirmed. In Montmorillonite, DMA had a contamination rate of about 80% regardless of pH conditions and a low contamination rate of about 20% of DMMTA(Fig. 1).

Adsorption behavior of arsenic species at different pH and solid often control the fate in natural environment [1,2].

Acknowledgement: This research was supported by the National Research Foundation of Korea (grant number NRF-2019R1A2C2007092)

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