

Sorption concentration of arsenic ions by magnetite

Kharlyamov D., Katasonov P., Mavrin G., Sippel I., Miftahov M.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© The author(s). This paper is focused on the possibility of using magnetite powders obtained by chemical and plasma-chemical method for sorption concentration of arsenic ions. Processes of arsenic concentration by two-site sorption in magnetite-water system have been studied, and the optimal conditions for concentration have been defined. In static mode, effects of pH, temperature and contact time on the adsorption process have been studied. As a result, a method for pre-sorption concentration has been proposed, allowing reducing the lower limit of the atomic absorption determination of arsenic content.

<http://dx.doi.org/10.5539/mas.v9n3p71>

Keywords

Arsenic, Concentration, Magnetite, Sorption