Developing innovations for adsorptive removal of arsenic from drinking water sources in North Mara gold mining area, Tanzania

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ABSTRACT

Arsenic (As) contamination in drinking water have been reported to occur in areas where mining are practiced such as North Mara, lake Victoria basin in Mwanza, Geita and Rukwa. The removal of As requires methods such as ion-exchange, reverse osmosis, electrodialysis, contact precipitation, activated alumina, bone charcoal and activated clay. The use of ion-exchange, reverse osmosis and electrodialysis are expensive to be implemented in Tanzania. In order to safeguard the drinking water supplies, it is important to explore the low-cost and efficient locally available adsorbents such as activated alumina, bone char and clay for the removal of As for drinking water consumption.