

عنوان مقاله:

Arsenic contamination in groundwater : an overview of emission sources, concentration control, and removal methods

محل انتشار:

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نویسندگان:

Farzad Mehrjo - Department of Environment, Faculty of Environmental and Natural Resources, University of Birjand, Birjand, Iran

Ahmadreza Zeynali - Department of Environment, Faculty of Environmental and Natural Resources, University of Birjand, Birjand, Iran

Amir Zeidi - Department of Environment, Faculty of Environmental and Natural Resources, University of Birjand, Birjand, Iran

خلاصه مقاله:

Arsenic is a chemical element with the symbol as and atomic number ۳۳ in the fifteenth and fourth periods of the periodic table. It is the twentieth most abundant element in the earth's crust, the twelfth in the human body, and the fourteenth in seawater. Arsenic contaminants in groundwater in the world include four aquifers in delta basins and alluvial plains, inland basins in arid and semi-arid regions, mining in areas with sulfide minerals, and geothermal sources. Researchers estimate that more than ۵۰۰ million people worldwide are exposed to arsenic, and the worst type of groundwater contamination ever reported was in Bangladesh, where about ۸۰ percent of the population is affected. Sources of arsenic contamination include natural sources such as rocks weathering, fossil fuels, etc., and human resources include drainage of acid mines, paint factories, glass production, etc. Controlling the concentration of this element in groundwater can be influenced by various factors such as oxidation and reduction (Eh), solution composition, type of sediment mineral, microbiological activity, etc. Methods of removing this contaminant include biological methods using bacteria and adsorbents such as titanium dioxide

کلمات کلیدی:

arsenic, Aquifer contaminant, Biology, Oxidation and reduction, Rocks weathering

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