Inorganic dissolution experiments and bacterial accumulation of arsenic for environmental problems of arsenic

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Bangladesh groundwater is largely polluted by arsenic. Preliminary dissolution tests of arsenic by acids, distilled water etc. were carried out using specimens of boring core samples from 10 feet to 210 feet in Samta village, Bangradesh.AAN-Hironaka method was used for analysis of arsenic. High concentration of arsenic was detected by grain-suspended water. But less arsenic was detected from centrifuged water. Much arsenic was dissolved by HCl and acetic acid. Arsenic was also dissolved by H2O2. These results give important clues for estimation of source minerals for arsenic pollution. Monji arsenic mine was also examined. Dissolution tests showed that the ores are easily dissolved in alkaline conditions. Bacteria collecting arsenic were observed in the water with arsenic ore specimens.

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