



ARSENIC REMOVAL FROM DRINKING WATER BY ION EXCHANGE RESINS

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Abstract

This paper examines the use of ion exchange resins (IER) to remove arsenic contamination present in drinking water by conducting column studies after a preliminary screening of a number of IER using batch equilibrium tests as well as column tests. The studies were conducted as a function of pH, and less than 10 ppb was achieved from an initial concentration of 200 ppb for As(V) with Purolite A-250 resin, a strong base anion (SBA) type II at a pH of 7.5 - 8.0, range typically encountered in drinking water supplies. The number of bed volumes that can be treated before exhaustion varies with the influent water quality parameters such as pH, competing ions and influent arsenic concentration.

Keywords: ion exchange resins, drinking water, arsenic removal, strong base anion type II

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