Removal of trichloroethylene (TCE) from groundwater by GAC and ZVI

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\textbf{ABSTRACT}

Dynamic and static test methods were used to investigate the removal efficiency of trichloroethylene (TCE) from ground water by different media of zero-valent iron (ZVI), two kinds of granular activated carbon (GAC), and a mixture of ZVI and GAC. The test results showed that ZVI, GAC, and the mixture of ZVI and GAC could effectively remove TCE. Under static conditions, the TCE removal rate by ZVI was 68.32%, the TCE removal rate by coconut shell GAC was 55.2%, and the TCE removal rate by ZVI + GAC was 90%. Under dynamic station, the mass ratio of one mixture of ZVI and GAC had the best TCE removal rate of over 85% at a flow rate of 25 ml/min.

\textbf{Keywords:} Trichloroethylene (TCE); Granular activated carbon (GAC); Zero-valent iron (ZVI); Ground water