

## Adsorption and Desorption Characteristics of Explosive Trinitrotoluene Wastewater in Activated Carbon Columns

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Recently, environmental regulations have become more stringent for the removal of trinitrotoluene. The separation of dissolved TNT from wastewater has been conducted by using many methods including carbon adsorption, solvent extraction, catalytic and advanced oxidation employing UV and hydrogen peroxide, biodegradation, and incineration. In this work, adsorption and desorption of TNT in activated carbon columns (granular activated carbon and activated carbon fiber) were investigated under key operating conditions such as temperature, concentration, column length, and flow rate. It was found that the adsorption capacity of the activated carbon was highly dependent on the temperature compared to other operating conditions.