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**EFFICIENCY OF REMOVING ARSENIC FROM DRINKING WATER  
USING ALUMINUM OXIDE AND FERRIC OXIDE**

A PROJECT REPORT PRESENTED BY

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# **EFFICIENCY OF REMOVING ARSENIC FROM DRINKING WATER USING ALUMINUM OXIDE AND FERRIC OXIDE**

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In recent years there has been widespread coverage in the media about the problems caused by arsenic in drinking water. Arsenic contamination in ground water in West Bengal, India, and neighboring Bangladesh has emerged into an international crisis. Over 100 million people are at risk of arsenic poisoning. More recently, because of the recognition that arsenic at low concentrations in drinking water causes severe health effects, extensive research has been carried out to remove arsenic from drinking water.

The purpose of this research is to reduce the arsenic level below  $10\mu\text{g/L}$  in drinking water using Aluminum oxide and Ferric oxide. In this study batch adsorption tests were used to evaluate the effects of arsenic adsorption using five ratios of aluminum oxide and ferric oxide.

More than 50% of arsenic adsorption efficiency can be achieved by adding (70-100) g/L of total aluminum oxide and ferric oxide in concentrations from 2ppb to 10ppb arsenic.