

NITRATE REDUCTION IN WATER USING IRON PARTICLE

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by

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ABSTRACT

Water is human basic need. Today water resources were contaminated from Nitrate due to excessive use of nitrogenous fertilizers and improper treatment of water was disposed. Nitrate originated from many sources such as nitrogenous fertilizers, animal wastes septic systems, industrial processes atmospheric deposition from nitrogen oxide emission.

Nitrate was contaminated in soil and water. Under ground water was contaminated due to that most of the water resources were contaminated from nitrate. When the people use nitrate contaminated water they have to face many hazards like cancers, Methenoglobbia, liver damage like deceases. World health Organization also imposed 50mg/l in water. That value should not be exceeded.

In this research I was reduced nitrate using sand and iron particles. I was prepared sand and iron mixture column for kept nitrate water. After that I was collected water samples in different time intervals. Finally nitrate concentration was measured using Nitra ver. 5 regent. Nitrate concentration was reduced to 43% percentage

I was done test using different iron particle weights and how the iron particle weight effect for the nitrate reduction.

To reduce the nitrate concentration water must be kept in 24 hours. In this process ammonia was generated .It's toxicity can be reduced using 5%NaOCl solution.