



**DEVELOPMENT OF MODIFIED FENTON'S
REACTOR USING IRON PYRITE**

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Abstract

Disinfectants such as chlorine are used in drinking water treatment to protect the public health from pathogenic microorganisms. However, disinfectants also react with non harmful, naturally occurring organic substances in the water and form by-products, such as trihalomethanes. Total trihalomethanes (TTHMs) include four compounds: chloroform, bromodichloromethane, dibromochloromethane and bromoform. TTHMs are carcinogenic and have been found to cause adverse pregnancy outcomes. Therefore, objective of the research is to find a feasible and effective method to treat the THM in the treated water and thereby to make it possible for developing countries to use already installed water treatment plants in the future too, without going for the costly methods.

The research has shown that THM concentrations can be minimized by using higher particle sizes and mass of Iron Pyrite which was obtained from the Bogala.

The study designed that model for a Fenton Reactor which is low cost and accessible to even poor people.