

**ARSENIC REMOVAL FROM WATER USING
HUMIC ACID MODIFIED MEETIYAGODA
KAOLINITE**

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by

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Abstract

Kaolinite is one of the major clay types which can be used to remove ions from the water by using its adsorption capacity. Though Sri Lanka is blessed with several clay types, none of them are used for value addition purposes.

By considering that fact and the unique ability which possesses by kaolinite to remove ions from water when it is in contact with water is focused throughout this research.

Meetiyyagoda kaolinite is used as clay type, because it is currently used only as a raw material for ceramic industry as well as none of the researches has been conducted to identify its ability to remove ions from water. Thus, the ultimate goal of this research is to fill up that gap and to develop a value added product from Meetiyyagoda kaolinite.

Throughout this research it focused on removing Arsenic (V) from water while modifying kaolinite surface using Humic Acid in order to enhance the adsorption capacity of kaolinite and measuring the removal amount of arsenic (V) by changing amount of clay, concentration of arsenic (V) and pH.

With increasing of arsenic concentration, arsenic adsorption on to humic acid modified Meetiyyagoda kaolinite has increased whereas increasing of amount of humic acid modified Meetiyyagoda kaolinite in solution, the adsorption has decreased. The highest sorption has gained when pH was in 6.0.