

Bacteria Removal from Wastewater by Electrocoagulation Process

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Abstract : Bacteria have played an important role in water contamination as a consequence of organic pollution. In this study, an electrocoagulation process was adopted to remove fecal contamination and pathogenic bacteria from waste water. The effect of anode/cathodes materials as well as operating conditions for bacteria removal from water, such as current intensity and initial pH and temperature. The results indicated that the complete removal was achieved when using aluminium anode as anode at current intensity of 3A, initial pH of 7-8 and electrolysis time of 30 minutes. This process showed a bactericidal effect of 95 to 99% for the total and fecal coliforms and 99% to 100% for Escherichia coli and fecal Streptococci. A decrease of 72% was recorded for sulphite-reducing Clostridia. Thus, this process has the potential to be one of the options for treatment where high amount of bacteria in wastewater river.

Keywords : bacteria, el Harrach river, electrocoagulation, wastewater, treatment

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