ABSTRACT
ABILITY TEST MIXED CULTURE BACTERIA Bacillus subtilis AND Bacillus megaterium FOR REMOVAL HEAVY METAL CHROMIUM (III)

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The most frequently factors that found as contaminants is heavy metals such as mercury, cadmium, chromium and plumbum that may affect human health when consume the water. Existence of heavy metals in the water will rise to the accumulation of waste water discharged into the river continously. This research is an attempt to improve environment with biosorption using bacteria Bacillus subtilis and Bacillus megaterium which will see the effectiveness to reduce the heavy metals with mixed culture at a ratio 25:75, 50:50 and 75:25.

Every mixed culture bacteria ratio analyzed the ability of removal of the chromium with different concentration 50 mg/L, 75 mg/L and 100 mg/L. The analysis was also performed on salinity and without salinity. Bacterial growth will be analyzed every 2 hours using Optical Density (OD) at a wavelength 600 nm and analysis of chromium using AAS method at the end and beginning.

The results of this research showed mixed culture of bacteria that are effective in removed of chromium in the wastewater is mixed culture with ratio 25:75 with a 66,23% rate of effectiveness to removal chromium concentration of 200 mg/L with salinity treatment for 3 hours.

Keyword: Biosorption, Bacillus subtilis, Bacillus megaterium, Chromium, Mixed Culture.
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