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KEY WORD:

INTER-DEPARTMENT OF ENVIRONMENTAL SCIENCE

CHROMIUM / PRECIPITATION / TANNERY WASTEWATER

PENPRAPA KUMPOM : REMOVAL OF CHROMIUM ION FROM TANNERY
WASTEWATER BY PRECIPITATION USING FLY ASHES. THESIS ADVISOR
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This research aims to investigate optimum condition and efficiency of removal of chromium ion from tannery wastewater by precipitation using fly ashes. Two major factors were considered in the research, which are an amount of fly ashes and pH condition. The experiment were done by using six different amounts of fly ashes ; 0%, 1.0%, 1.25%, 2.5%, 5.0% and 10% in various pH conditions (6,7,8,9,10,11 and 12).

The results indicated that the optimum condition of the precipitation for chromium ion of tannery wastewater is at pH 9 and 1.25% of fly ashes. Chromium removal efficiencies are 95.79%

In addition, the research also studied the suitable temperature of removal for chromium ion from tannery wastewater at those suitable amounts of fly ashes and pH condition. The experiment were performed by using 1% of fly ashes and pH 11 at ambient temperature, 27, 30, 33, 35 and 37 °C, comparing with 60°C. The results indicated that those temperatures do not have significant effects on removal of chromium ($p = 0.05$).

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