Treatment of Tannery Wastewater through Calcium Carbonate from Mollusca (Snail Shell)

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Abstract

Leather preparing is only the change of putrescible hide/skin into imputrescible calfskin and thusly, an immense measure of strong, fluid and vaporous waste is produced. During tanning activity, diverse tanning operators are utilized. Among them, Chromium(III) salts are the most generally utilized and a high level of chromium stays in the solids and fluids squanders (particularly as spent chrome liquor). Right now, we are presenting a feasible answer for exorcizing this enormous measure of chromium from Cr tanned waste liquor. The powder produced using locally accessible snail shells to expel chrome from Cr tanned waste liquor. Mollusca is generally known as snail shell which is effectively found in the neighborhood Bangladesh. Investigations were completed to get the optimum dose amount, contact time and kinetics of snail shell to get the ideal expulsion of chromium from Cr tanned wastewater. At improved conditions, 0.5g powder was mixed in with 50 ml chromium-containing wastewater for 10 minutes, fixed and afterwards chromium content in the filtrate was estimated by the titrimetric technique. The amount of chromium in the crude wastewater and filtrate was 3004.43 mg/L and 53.63 mg/L individually. The chromium expulsion proficiency was 99.14% at pH 10.8. The critical decrease was found on BOD, COD after treatment. So, the utilization of snail shells to expel chromium from Cr tanned wastewater could be considered fruitful and it tends to be a compelling answer for the issue made by chrome-tanned wastewater to the earth or the supportable waste administration.

Keywords
Tanning, wastewater, chromium (III) salts, BOD and COD.

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