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Removal of Protein from Chromium Tanning Bath by Biological Treatment Using Pseudomonas sp.

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Abstract : The challenge for the new millennium is to develop an industrial system that has minimal socio-ecological impacts, without compromising quality of life. Leather industry is one of these industries demanding environmentally friendly products. In this study, we investigated the possibility of applying innovative low cost biological treatment using Pseudomonas aeruginosa. This strain tested the efficiency of the batch biological treatment in the recovery of protein and hexavalent chromium from chromium tanning bath. We have compared suspended and fixed bacteria culture. The results showed the removal of the total protein of treatment and a decrease of hexavalent chromium concentration is during the treatment. The better efficiency of the biological treatment is obtained when using fixed culture of P. aeruginosa.

Keywords : tanning wastewater, biological treatment, protein removal, hexavalent chromium
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