Development of a process for the treatment of fish processing saline wastewater

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\textbf{ABSTRACT}

In recent years, there has been a great development of fish industries in coastal countries. The wastewaters generated from such industries have an important organic load which reaches 4,000 mg/L of chemical oxygen demand (COD) and high salt concentration with a TDS of about 60 g/L. In order to reduce the organic load of these effluents, a physico-chemical process by coagulation/flocculation was coupled with a biological process. The pretreatment by coagulation/flocculation showed great performance resulting in the removal of 60 and 84\% of COD and turbidity, respectively. However, the combined treatment (physico-chemical and biological process) achieved high-performance degradation of the organic load corresponding to the removal of 85\% of total organic carbon (TOC) for the first effluent E1 of high salinity (55 g/L) and the removal of 96\% of TOC for the second effluent E2 of relatively high salinity (18 g/L).

\textit{Keywords:} High salt concentration; Organic load; Coagulation/flocculation; Biological process

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