EVALUATION OF SOME ENVIRONMENTAL INDICATORS OF TANNERY WASTEWATER IN OSUMI RIVER

Gentiana Shegani[1], Anila Kala[2], Aida Bendo[3]

[1]Public Health Directory, Albanian University, Berat, Albania E-mail:gentaberat@shqiptar.eu
[2]Regional Directory of Environment, Albanian University, Berat, Albania
E-mail: anila_kala@ymail.com
[3]Sports University of Tirana, Albania; E-mail: bendoaida@hotmail.com

Abstract

A wide range of chemicals and processes are used in leather industry, which have a negative impact on aquatic ecosystem and in the quality of environmental performance. This study aimed to assess some environmental indicators of tannery wastewater in Osumi River. Although it is recognized the pollution of Water River by discharges of leather processing, never before has been conducted a genuine study for assessment of pollution in the area. Water samples have been taken at four important and different places. All samples were analyzed according to standard methods and reagents of high analytical quality. All the physical-chemical indicators of leather wastewater depend from the different phases of leather processing. pH varies at limits 9,2-12,5; Total alkalinity varies from 92-2245 $mg/L\ CaCO_3$; TSS varies from 243-2421.6 mg/L; TDS varies at limits 918-8974,41 mg/L; ammonia ions (NH_4^+) from 3,52-45 mg/L; chlorides (Cl^-) varies at limits 97,725-10280,5 mg/L; phosphates (PO_4^{3-}) varies from 1,2-3,25 mg/L; T^0C varies from $12^0 - 23.5^0C$; chromium (VI) varies at limits 0,1-0,45 mg/L; total Fe from 0,7-2,25 mg/L; values of $COD_{(Mn)}$ varies from 145,6-11200 $mg/L\ O_2$; nitrate ions (NO_3^-) varies from 5,7-45,8 mg/L. This survey provided the latest data on the quality of industrial effluent in leather processing, based on the definition of some environmental contaminants. Composite untreated wastewater has been found turbid, colored and smelling. The Study of Osumi River pollution by leather effluent is an innovation. Related negative impact of leather effluent on the environment, leather wastewater treatment remains a priority for the future.

***Keywords**: environmental indicators, tannery wastewater, osumi river.*