

# **AMMONIA (NH<sub>3</sub>) AND CHROMIUM (Cr) TREATMENT OF TANNING WASTEWATER BY USING ELECTROLYSIS METHOD FROM CARBON (C) AND COPPER (Cu)**

**AHMAD MURSID WIDODO**

**14612227**

## **ABSTRACT**

Wastewater treatment of tanning waste by electrolysis method using carbon (C) as anode and copper (Cu) as a cathode. This research aims to reduce the levels of ammonia (NH<sub>3</sub>) and chromium (Cr) on wastewater tank. The decrease of ammonia and chromium concentration was done by electrolyzing 50 ml of tannery liquid waste with voltage variation of 2, 4, 6, 8 and 10 V and also they were tested using a UV-Vis spectrophotometer and for a decrease of chromium content was tested using AAS. The result of the research shows that the optimum voltage for electrolysis of ammonia and chromium is 10 V with 45 minutes of electrolysis time. At a voltage as much as 10 V with 45 minutes, there is a visible change of waste color from grayish turbid into a clear one and this is also followed by a decrease in ammonia as much as 95.30% of initial concentration before the process of 39.50 ppm to 1.83 ppm and decrease levels of chromium of 80.32% from initial concentration of 92.00 ppm to 18.11 ppm. The reduction of ammonia and chromium concentration from tanning wastewater was significant and this method can be used as an alternative for treating tanning wastewater process.