ABSTRACT

NURINA PRATIWI. Elimination of chromium (Cr) metal from leather tanning’s wastewater using organicremoval as fisheries supply water intial treatment. Supervised by KUKUH NIRMALA and EDDY SUPRIYONO

Alternative way to use freshwater in fisheries is exertion water from tannery that contain Chromium (Cr) metal. Firstly it must be treated to reduce Cr metal so it could be used as supply water. Using cassava’s bark and shell nut as an organicremoval of Cr metal is the one metal removal technology easily and cheaper, so the tannery’s wastewater can be applied as fisheries supply water. Treatment toward cassava’s bark and shell nut consist of washing of destilation water (DWO), nitric acid modification (NAO) and phosphoric acid modification (PAO). Acid modification against cassava’s bark and shell nut can increase ability of Cr metal adsorption. The acids are nitrite acid 0.6 M and phosphoric acid 0.6 M within 40 minutes time adsorption. The highest adsorption effectivity is 97.83% and adsorption capacity 56.25 µgCr/g organicremoval by cassava’s bark organicremoval NAO. Cassava’s bark adsorben could decreases Cr contain from 1.15 to 0.025 mg/L. Cassava’s bark organicremoval could decreases Cr rate more than 90%. Adsorption ability of cassava’s bark is better than shell nut relatively.

Keyword : tannery wastewater, chromium metal, water supplay, cassava’s bark, shell nut.