

APPLICATION OF METAL OXIDE RESULTS ELECTROCOAGULATION WASTE LIQUID ELEKTROPLATING FOR CERAMIC CLASS DYES

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ABSTRACT

Electroplating liquid waste contains anions and cations that are harmful to the environment. The levels of anions and cations in electroplating liquid waste are still relatively high, requiring further processing and utilization. Electrocoagulation waste treatment has been done to precipitate Cd, Cr, Cu and Pb metals. The electrocoagulation conditions have been optimized include combinations of electrodes, time and pH. At the optimum condition, the largest percentage of the coagulated metal was obtained. Electrocoagulation result of floc containing metal Cd, Cr, Cu and Pb (Siti Marwati and Regina Tutik Padmaningrum, 2016).

This research is an advanced research of optimization of electrocoagulation conditions of copper, chromium, and lead metal in electroplating wastewater (Siti Marwati and Regina Tutik Padmaningrum, 2016). In this research, the application of floc resulting from electrocoagulation as a dye of gelasir material for ceramic tile. The oxide was mixed with quartz and applied to the manufacture of ceramic glass dye. The purpose of this study was to study 1) the influence of the combustion temperature on the color of the glass, and 3) the effect of the metal oxide concentration in the floc to the color of the tiled ceramic. The oxide character formed is seen with XRF tools while the character of the glass color is measured by chromameter. The results showed that the variation of combustion temperature and floc mass had an effect on the color of gelasir.

Kata Kunci: *Keywords: gelasir, metal oxide, electrocoagulation*