

DECREASE THE CONCENTRATION OF *CHEMICAL OXYGEN DEMAND* (COD) OF SOYBEAN INDUSTRY WASTE USING ELECTROCOAGULATION METHOD

ABSTRACT

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This research was conducted to decrease the concentration of Chemical Oxygen Demand (COD) of soybean waste by electrocoagulation method with Al electrode. The COD concentration reduction process was performed on an electrocoagulation reactor equipped with cathode, anode and current source (power supply). In this research, variations of electrodes, voltage and electrocoagulation time were observed to determine the optimal conditions of COD concentration reduction. Then the sample of electrocoagulation process was analyzed by using UV-Vis Spectrophotometer. The results showed that the optimum conditions of COD concentration reduction level of electrode, voltage and electrocoagulation were Al-Al, 10 V, and 60 minutes, respectively, with COD concentration reduction soybean waste in was 72,77%.

Keywords: COD, soybean waste, electrocoagulation, aluminum, iron.