

# ***PROTOTYPE OF BATIK WASTE TREATMENT EQUIPMENT WITH ELECTROCOAGULATION METHOD USING FUZZY LOGIC***

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## ***ABSTRACT***

*Liquid waste generated from the batik production process can cause environmental pollution because it contains heavy metals and chemicals that can cloud the color of the water and damage the water ecosystem around the river. As a result, the water quality is getting worse so it is not suitable for use as clean water. To overcome this problem, the researchers made a prototype of a batik liquid waste treatment using the electrocoagulation method which was optimized with Fuzzy Logic Control. The results of the tests carried out can reduce the TDS level from 1540 ppm to 755 ppm, Turbidity from 60.38 NTU to 1.17 NTU and maintain the increase in pH so that it does not exceed the original threshold pH 7.42 to 8.36. The results of this study are in accordance with the quality standards of batik wastewater.*

***Keywords:*** batik, electrocoagulation, TDS, pH, Turbidity, wastewater quality standards, Fuzzy Logic Control