

**“LIQUID WASTE DISPOSAL EFFECT OF BATIK HOME INDUSTRY ON
THE QUALITY OF GROUNDWATER IN THE WUKIRSARI VILLAGE,
IMOIRI SUB DISTRICT, BANTUL DISTRICT,
SPECIAL REGION OF YOGYAKARTA”**

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ABSTRACT

Most of the batik product in Indonesia are produced by the home industry which are located on Java Island. The industry are rapidly growth in line with the increase of population as an effort to meet the daily economic needs. However, on the other hand these industries produced wastewater that could potentially polluting the environment. It affects the quality of groundwater, because the wastewater disposal will be absorbed into the soil and contaminating the groundwater nor the river. The purpose of this study are : (1) To know the direction of groundwater flow and the distribution of groundwater contamination due the batik wastewater disposal, (2) To know how much the influence of batik wastewater pollution against the quality of groundwater in terms of parameters such as color, odor, pH, TSS, BOD, COD, ammonia (NH₃), Phenol, Oils and Grease, (3) To know to know the proper technical management to cope with the wastewater pollution at Wukirsari Village, Imogiri Sub-districts, Bantul Districts, Special Region of Yogyakarta.

The method used in this study are surveying method, mapping and laboratory test analysis which include to determine the physical parameters such as : (1) groundwater levels, (2) groundwater absorption, (3) type of soil and lithologies. Laboratory test analysis was conducted to determine the levels of ammonia, pH, BOD, COD, Phenol, Oils and Grease and TSS on groundwater samples and batik wastewater (outlet). The test results will be use as a comparison based on the DIY Governor Regulation No. 20 of 2008 concerning Water Quality Standard (Class 1 water) at Special Region of Yogyakarta and DIY Governor Decree No. 7 of 2010 Concerning Liquid Waste Quality Standard towards Industrial Activities for batik wastewater samples (outlet).

From the results of groundwater levels measurement at the study area, known that the groundwater flows are flowing from east to west and tend to the creek located in the center of the settlement. On the distribution of waste pollutants produced by batik industrial activities, known that the distribution are following the direction of groundwater flows. Based on the samples test result in the laboratory, the highly influential batik wastewater parameters in the quality of groundwater contamination are Ammonia, BOD, COD, TSS, Oils and Grease. The proper technical management guideline to cope with the batik home industry wastewater pollution is by applying wastewater treatment plant with the Active Sludge method.

Keywords: Groundwater, Batik Wastewater, Groundwater Quality, Contamination