

## ABSTRACT

This research is conducted in Kalirejo Village, Kokap Subdistrict, Kulon Progo Regency, Special Province of Yogyakarta. The area is astronomically in  $7^{\circ} 47' - 7^{\circ} 50'$  South Latitude and  $110^{\circ} 6' - 110^{\circ} 9' 30$  East Longitude. The aim of this research is to find out the impact emerged by mercury use towards the water quality of Plampang River in Kalirejo Village, Kokap Subdistrict, Kulon Progo Regency.

The method of this research is survey and laboratory analysis. Whereas the sampling uses Purposive Sampling Method with consider the river flow in the research area. The tested parameters are physics parameter, such as temperature, turbidity, TDS and chemical parameter in forms of pH and Hg.

Based on the analysis result and data evaluation, it indicates that the activity of gold ore processing from the citizenry mining in Kalirejo Village gives impact to the mercury pollution in Plampang River. The result of laboratory analysis done in the Integral Research and Test Laboratory (LPPT), Gajah Mada University of Yogyakarta indicates that the amount of Hg in Plampang river is in the point of 1  $< 0.0001$  mg/l, point of 2 is 0.0257 mg/l, point of 3 is 0.0014 mg/l, point of 4 is 0.0349 mg/l, point of 5 is 0.00291 mg/l, point of 6 is  $< 0.001$ , and point of 7 is  $< 0.001$  mg/l. The processing which can be done in the research area is through an economic social approach that can be an approach to the society, and an institution approach which is a monitoring of environment and health quality periodically for the miners and society who are indicated suffering mercury.

Keywords: Gold Mining, Water Pollution, Water Quality, Quality Standard