

**THE EFFECT OF LIQUID WASTE DISPOSAL (POST PRODUCTION  
STAGE) OF PG. TASIKMADU TOWARDS THE JONGKRANG RIVER  
COMPOSITION WATER BIOTA DIVERSITY, KARANGANYAR,  
CENTRAL JAVA**

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**ABSTACT**

The Utilization of Natural Resources, and it's management until this day especially in Inonesia, lacks to concentrate on the aspects of environmental sustainability that will eventually destroy those natural resources itself. As a company that utilizes the natural resource and produces excess products that can pollute the environment. The Tasikmadu Sugar Factory has to maintain and conserve the environments balance (especially water areas) and sustainability. Besides the sustainability of it's natural resources, the pollutant can also endanger the community that uses the water river for irrigation.

This research was done at the Jongkrang River (and the river confluents), Tasikmadu District, Karanganyar Residence, Central Java Province to study the effects of liquid waste of the Tasikmadu Sugar Factory towards the abundance and composition of water biota as an indicator of the rivers water pollution. This research uses completely random design with 3 trials of 9 treatments (divided based on distance of each observation station of 1 Km in length). Analysis used consists of Variance Analysis (to know significant differences of each observation station, Regression Analysis to know the influence of each parameters (river flow speed, temperature, pH also pollution/total fatty oil concentration) towards abundance and composition of river biota.

The average Phytoplankton density for each observation station accordingly is 156, 163, 53, 66, 72, 74, 79, 86, 92 (each number x 10<sup>4</sup>) individuals/liter. The average Zooplankton density for each observation station accordingly is 51, 58, 10, 12, 13, 17, 19, 21, 24 (each number x 10<sup>4</sup>) individuals/liter. The average Nekton density for each observation station accordingly is 15, 15, 6, 8, 9, 10, 11, 11, 12 individuals. Based of diversity index calculation the Jongkrang River is categorized as a water area partially polluted (for observation station III – IX), as for observation station I and II is categorized as clean water area.

**Key words** : Phytoplankton Density, Zooplankton Density, Nekton Density also Diversity Index and Index, Chemical and Physical Parameter of Water.

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