

**THE EFFECT OF TOFU INDUSTRIAL LIQUID WASTE ON THE WATER
QUALITY OF THE ELO RIVER IN MEJING VILLAGE, CANDIMULYO
DISTRICT, MAGELANG REGENCY, CENTRAL JAVA PROVINCE**

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ABSTRACT

Soybeans contain many nutrients and can be consumed into various kinds of processed products such as tofu, in addition to producing tofu products, it also has an impact on liquid waste. This liquid waste is caused by the existence of a tofu factory that stands in the middle of a residential area in Mejing Village. The liquid waste of the tofu industry contains high organic pollutants which results in a decrease in water quality around the tofu industry. The purpose of this study is to examine the values of BOD, COD, TSS and pH of liquid waste in the tofu industry in Mejing Village, Candimulyo District, Magelang Regency and to determine the level of pollution of liquid waste from the tofu industry on the water quality of the Elo River, Mejing Village, Candimulyo District, Magelang Regency. The research was carried out from April to June 2024. The determination of the location of the sample point was carried out by the purposive sampling method by considering the location based on two types of water pollution by tofu industrial liquid waste, namely the downstream part and the tofu liquid waste disposal outlet. There are 4 parameters that will be observed in this study, namely BOD (Biological Oxygen Demand), COD (Chemical oxygen Demand), TSS (Total Suspended Solid) and pH. The test results on BOD, COD, TSS and pH liquid waste based on the Regulation of the Minister of Environment of the Republic of Indonesia Number 5 of 2014 concerning Wastewater Quality Standards have values that are above the quality standard threshold. Meanwhile, the results of river water quality testing based on Government Regulation Number 82 of 2001 concerning Water Quality Management and Class II Water Pollution Control on COD and TSS parameters showed results below the quality standard threshold, while the BOD and pH parameters at some points showed values in accordance with the quality standard threshold and some others showed values in accordance with the quality standard threshold.

Keywords: Liquid Waste, Water Quality, Tofu Industry, Mejing Village.