

INSTITUT TEKNOLOGI DAN KESEHATAN MAHARDIKA

FAKULTAS KESEHATAN

PROGRAM STUDI KESEHATAN MASYARAKAT

Skripsi, Mei 2025

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**PENGARUH PEMBUANGAN LIMBAH CAIR PABRIK TAHU
TERHADAP KUALITAS FISIK AIR SUNGAI DI DESA KEDUNG JAYA
KABUPATEN CIREBON**

Xiii + 50 + 9 Tabel + 2 Bagan + 12 Lampiran

ABSTRAK

Pembuangan limbah cair tahu merupakan air sisa dari suatu hasil usaha dan/atau kegiatan yang jika di buang sembarangan akan menyebabkan pencemaran air. Hal ini menjadi faktor dalam penurunan kualitas fisik air sungai di Desa Kedung Jaya, Kabupaten Cirebon. Parameter kualitas fisik air sungai yang diamati meliputi suhu, *Total Dissolved Solid* (TDS), dan pH. Tujuan penelitian ini untuk mengetahui pengaruh pembuangan limbah cair tahu terhadap kualitas fisik air sungai di desa Kedung Jaya Kabupaten Cirebon Tahun 2025. Manfaat teoritis dalam penelitian ini untuk menambah wawasan dan pengetahuan pada pengembangan kesehatan lingkungan, khususnya dalam pengelolaan limbah cair pabrik tahu dan pencemaran air sungai. Penelitian ini dilakukan pada air sungai di desa Kedung Jaya dengan populasi keseluruhan kondisi air sungai baik hulu, pembuangan dan hilir yang dipengaruhi oleh limbah cair tahu dan sampel yang digunakan yaitu sebanyak 84 sampel. Metode yang digunakan adalah pendekatan kuantitatif dengan desain penelitian observasional analitik. Penelitian ini menggunakan lembar observasi dan analisis data Multivariat Of Variance (MANOVA). Hasil penelitian uji multivariat pada variabel pembuangan limbah cair tahu yang memiliki faktor seperti (pabrik, volume limbah, pembuangan limbah, stasiun, waktu, dan cuaca) menunjukkan pengaruh yang signifikan terhadap kualitas fisik air sungai di desa Kedung Jaya. Selain itu hasil interaksi dua faktor MANOVA menunjukkan pengaruh yang signifikan terhadap kualitas fisik air sungai. Sedangkan hasil penelitian uji test between subjects effects pada variabel pabrik, stasiun, cuaca berpengaruh signifikan terhadap kualitas fisik air sungai dengan nilai signifikansi $0,000 < 0,05$ dan variabel pembuangan limbah hanya berpengaruh signifikan pada variabel suhu dan pH, volume limbah dan waktu hanya berpengaruh signifikan terhadap variabel TDS dan pH. Serta pada uji test between subjects effects interaksi dua faktor menunjukkan nilai signifikansi $0,000 < 0,05$ yang artinya ada pengaruh interaksi 2 faktor terhadap kualitas fisik air sungai.

Kata Kunci: limbah cair pabrik tahu, kualitas fisik air, suhu, TDS, pH

Daftar Pustaka: 26 (2002 – 2023)

MAHARDIKA INSTITUTE OF TECHNOLOGY AND HEALTH

HEALTH FACULTY

STUDY PROGRAM OF PUBLIC HEALTH

Mini Thesis, Mei 2025

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***THE IMPACT OF TOFU FACTORY LIQUID WASTE DISCHARGE ON
THE PHYSICAL QUALITY OF RIVER WATER IN KEDUNG JAYA
VILLAGE, CIREBON REGENCY***

Xiii + 50 + 9 Tables + 2 Scheme + 12 Enclousure

ABSTRACT

The disposal of tofu liquid waste refers to wastewater resulting from business and/or industrial activities, which, if discharged carelessly, can lead to water pollution. This has become a contributing factor in the decline of the physical quality of river water in Kedung Jaya Village, Cirebon Regency. The observed parameters of river water physical quality include temperature, Total Dissolved Solids (TDS), and pH. The purpose of this study is to determine the effect of tofu liquid waste disposal on the physical quality of river water in Kedung Jaya Village, Cirebon Regency, in 2025. The theoretical benefit of this research is to broaden knowledge and insight in the field of environmental health development, particularly in the management of tofu factory liquid waste and river water pollution. This study was conducted on river water in Kedung Jaya Village, with the population consisting of the overall river water conditions—upstream, at the waste disposal point, and downstream—affected by tofu liquid waste. A total of 84 samples were used. The method applied is a quantitative approach with an analytical observational research design. The study employed observation sheets and data analysis using Multivariate Analysis of Variance (MANOVA). The results of the multivariate test on the tofu liquid waste disposal variable, which includes factors such as factory, waste volume, waste disposal method, station, time, and weather, showed a significant effect on the physical quality of the river water in Kedung Jaya Village. Additionally, the MANOVA two-factor interaction results indicated a significant influence on the physical quality of the river water. Furthermore, the results of the test of between-subjects effects revealed that the variables of factory, station, and weather had a significant effect on the physical quality of the river water, with a significance value of $0.000 < 0.05$. The waste disposal variable had a significant effect only on temperature and pH, while waste volume and time had a significant effect only on TDS and pH. Moreover, the between-subjects effects test on the two-factor interaction showed a significance value of $0.000 < 0.05$, indicating that there is an interaction effect between two factors on the physical quality of river water.

Keywords: tofu liquid waste, physical water quality, temperature, TDS, pH, MANOVA, environmental health

Reference : 26 (2002 – 2023)