

GAMBARAN KUALITAS LIMBAH KECUTAN DI UNIT PROSES PRODUKSI TAHU DI DUSUN KWARON, DESA NGESTIHARJO, KASIHAN, BANTUL

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INTISARI

Latar Belakang: Industri tahu merupakan salah satu industri rumah tangga yang menghasilkan limbah kecutan dengan kandungan bahan organik yang tinggi. Industri Tahu Bapak Giyono di Dusun Kwaron, Desa Ngestiharjo, Kasihan Bantul membuang limbah kecutan langsung ke saluran pembuangan tanpa pengolahan terlebih dahulu. Hal ini berpotensi mencemari lingkungan, menurunkan kualitas badan air, dan menimbulkan bau tidak sedap di sekitar lokasi.

Tujuan: Mengetahui kualitas limbah kecutan industri tahu di Dusun Kwaron, Desa Ngestiharjo, Kecamatan Kasihan, Kabupaten Bantul berdasarkan parameter BOD, COD, TSS, suhu, dan pH serta membandingkannya dengan baku mutu Peraturan Daerah Daerah Istimewa Yogyakarta Nomor 7 Tahun 2016.

Metode: Penelitian ini merupakan survei deskriptif dengan pendekatan observasional. Pengambilan sampel limbah kecutan dilakukan sebanyak 3 kali pengulangan pada bulan Mei 2026 di outlet unit penyaringan dan pencetakan. Pemeriksaan BOD, COD, TSS dilakukan di Balai Besar Laboratorium Kesehatan Masyarakat Yogyakarta, sedangkan suhu dan pH diukur secara langsung di lokasi penelitian. Data dianalisis secara deskriptif dan dibandingkan dengan baku mutu yang berlaku.

Hasil: Rata-rata kadar BOD sebesar 3564,67 mg/L, COD 7633,33 mg/L, TSS 465,33 mg/L, suhu 24,97°C, dan pH 3,87. Nilai BOD, COD, TSS, dan pH tidak memenuhi baku mutu, sedangkan suhu memenuhi baku mutu. Hasil perhitungan beban pencemar menunjukkan BOD sebesar 17,82 kg/ton, COD 38,17 kg/ton, dan TSS 2,33 kg/ton.

Kesimpulan: Kualitas limbah kecutan industri tahu belum memenuhi baku mutu yang ditetapkan. Parameter BOD, COD, TSS, dan pH melebihi baku mutu, sedangkan suhu memenuhi baku mutu. Limbah cair berpotensi mencemari lingkungan apabila dibuang tanpa pengolahan terlebih dahulu.

Kata Kunci: Limbah Kecutan, Industri Tahu, BOD, COD, TSS.

**OVERVIEW OF TOFU WHEY WASTEWATER QUALITY IN THE
PRODUCTION UNIT OF TOFU INDUSTRY IN KWARON HAMLET,
NGESTIHARJO VILLAGE, KASIHAN, BANTUL**

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ABSTRACT

Background: The tofu industry is one of the household industries that generates wastewater with high organic content. Wastewater discharged without treatment has the potential to pollute the environment, degrade water body quality, and disrupt public health.

Objective: To determine the quality of tofu whey wastewater from the tofu industry in Kwaron Hamlet, Ngestiharjo Village, Kasihan Sub-district, Bantul Regency based on BOD, COD, TSS, temperature, and pH parameters and to compare it with the quality standards of the Special Region of Yogyakarta Governor Regulation Number 7 of 2016.

Method: This study used a descriptive survey with an observational approach. Tofu whey wastewater sampling was carried out 3 times in May 2026 at the outlet of the filtering and molding unit. BOD, COD, and TSS analyses were conducted at the Yogyakarta Center for Environmental Health and Disease Control Laboratory, while temperature and pH were measured directly at the research site. Data were analyzed descriptively and compared with applicable quality standards.

Results: The average levels were BOD 3564.67 mg/L, COD 7633.33 mg/L, TSS 465.33 mg/L, temperature 24.97°C, and pH 3.87. BOD, COD, TSS, and pH values did not meet the quality standards, while temperature met the standards. The pollutant load calculations showed BOD of 17.82 kg/ton, COD of 38.17 kg/ton, and TSS of 2.33 kg/ton.

Conclusion: The quality of tofu whey wastewater from the tofu industry does not meet the established quality standards. BOD, COD, TSS, and pH parameters exceeded the quality standards, while temperature met the standards. Wastewater has the potential to pollute the environment if discharged without prior treatment.

Keywords: Tofu Whey Wastewater, Tofu Industry, BOD, COD, TSS.