

PEMANTAUAN KUALITAS DAN KUANTITAS LIMBAH CAIR INDUSTRI BATIK TOPO DI DUSUN PIJENAN, WIJIREJO, PANDAK, BANTUL

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INTISARI

Latar Belakang: Industri batik menghasilkan limbah cair yang mengandung zat pencemar seperti meningkatnya kadar BOD, COD, TSS, dan pH yang dapat berpotensi mencemari lingkungan. Industri Batik Topo melakukan pengolahan sederhana dengan pengendapan secara gravitasi dan langsung dibuang ke sungai. Sehingga diperlukan pemantauan kualitas dan kuantitas limbah cair sebelum dibuang ke badan air untuk memenuhi baku mutu yang telah ditetapkan.

Tujuan: Mengetahui kualitas dan kuantitas limbah cair Industri Batik Topo di Dusun Pijenan, Wijirejo, Pandak, Bantul.

Metode: Jenis penelitian observasional-deskriptif. Pengambilan sampel menggunakan metode *grab sampling* pada saluran limbah sebelum masuk ke sungai kemudian diperiksa kualitasnya di laboratorium. Pengujian dilakukan 4 kali selama April–Mei 2025. Parameter yang diuji yaitu BOD, COD, TSS, dan pH dan dibandingkan dengan baku mutu.

Hasil: Hasil penelitian ini didapatkan rata-rata kadar BOD 244,5 mg/L, kadar COD 565 mg/L, kadar TSS 204,75 mg/L, dan pH 8,09. Volume limbah cair yang dihasilkan sebesar 1,62 m³. Untuk debit dihasilkan sebesar 1,62 m³/hari, sementara untuk debit limbah paling banyak didapatkan hasil sebesar 36 m³/ton produk. Hasil tersebut menunjukkan bahwa kadar BOD, COD, dan TSS melebihi baku mutu, sedangkan pH dan debit limbah memenuhi baku mutu menurut Perda DIY Nomor 7 Tahun 2016 tentang Baku Mutu Air Limbah.

Kesimpulan: Kualitas limbah cair Industri Batik Topo untuk pH dan debit limbah paling banyak memenuhi baku mutu, sedangkan BOD, COD, dan TSS melebihi baku mutu Perda DIY Nomor 7 Tahun 2016 tentang Baku Mutu Air Limbah. Sehingga diperlukan pengolahan lanjutan sebelum dibuang ke badan air agar tidak mencemari lingkungan.

Kata Kunci: Batik, Limbah Cair, Kualitas dan Kuantitas Limbah Cair

MONITORING THE QUALITY AND QUANTITY OF LIQUID WASTE OF BATIK TOPO INDUSTRY IN PIJENAN HAMLET, WIJIREJO, PANDAK BANTUL

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ABSTRACT

Background: Batik industry produces liquid waste containing pollutants such as increased levels of BOD, COD, TSS, and pH, which can potentially contaminate the environment. Topo Batik industry carries out simple processing through gravity sedimentation and directly discharges it into the river. Therefore, monitoring the quality and quantity of liquid waste is necessary before being discharged into water bodies to meet the established quality standards.

Objective: To assess the quality and quantity of liquid waste from Batik Topo Industry in Dusun Pijenan, Wijirejo, Pandak, Bantul.

Method: Descriptive observational research type. Sampling was performed using the grab sampling method on the wastewater channel before it enters the river, then its quality was examined in the laboratory. Testing was conducted 4 times during April-May 2025. The parameters tested include BOD, COD, TSS, and pH, which were compared to quality standards.

Result: The results of this study indicate an average BOD level of 244.5 mg/L, COD level of 565 mg/L, TSS level of 204.75 mg/L, and pH of 8.09. The volume of liquid waste produced is 1.62 m³. The output is 1.62 m³/day, while the waste discharge is most significantly recorded at 36 m³/ton of product. These results show that the levels of BOD, COD, and TSS exceed quality standards, while pH and waste discharge meet the quality standards according to Regional Regulation of DIY Number 7 of 2016 concerning Wastewater Quality Standards.

Conclusion: The quality of wastewater from the Topo Batik industry in terms of pH and discharge mostly meets the quality standards, while BOD, COD, and TSS exceed the quality standards set by the Regional Regulation of DIY Number 7 of 2016 concerning Wastewater Quality Standards. Therefore, further treatment is needed before it is discharged into water bodies to prevent environmental pollution.

Keyword: Batik, Wastewater, Quality and Quantity Wastewater.