

**DAMPAK LIMBAH INDUSTRI BATIK TERHADAP KUALITAS AIR
SUNGAI DENGKENG DESA PASEBAN KECAMATAN BAYAT
KABUPATEN KLATEN PROVINSI JAWA TENGAH**

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ABSTRAK

Kecamatan Bayat merupakan sentra industri batik. Pengrajin batik masih belum mengelola limbahnya menggunakan Instalasi Pembuangan Air Limbah (IPAL). Penelitian ini bertujuan untuk mengungkapkan dampak limbah industri batik terhadap kualitas air sungai Dengkeng. Metode yang digunakan yaitu metode survei untuk mengetahui keadaan wilayah disekitar titik sampel. Penentuan titik pengambilan sampel dilakukan menggunakan purposive sampling berdasarkan jarak dari titik pembuangan limbah industri batik di sungai ke arah hilir sesuai aliran sungai. Pengambilan sampel air sungai dilakukan menggunakan teknik grab sampling yaitu pengambilan sampel air secara langsung. Terdapat 6 sampel titik air sungai perwakilan Sungai Dengkeng yang dipilih. Parameter yang dianalisis adalah parameter fisika (Suhu, TSS, dan TDS) dan kimia (pH, BOD, COD, Pb, Cr, DO). Hasil analisis laboratorium menunjukkan bahwa nilai BOD maupun COD pada titik kontrol, titik sampel 2 sampai dengan 5 air Sungai Dengkeng melebihi baku mutu. Titik sampel 3 dan 4 yang terkontaminasi limbah dari kawasan padat industri batik menunjukkan kadar Pb yang melebihi baku mutu dan DO yang lebih rendah dari baku mutu kelas 3 menurut Peraturan Pemerintah Nomer 22 Tahun 2021. Berdasarkan perhitungan Indeks Pencemaran, sungai Dengkeng termasuk dalam kategori cemar ringan. Nilai Indeks Pencemaran tertinggi terdapat pada titik sampel 4 yaitu sebesar 4.9199 termasuk dalam kategori cemar ringan, sedangkan nilai terendah terdapat pada titik sampel 1 yaitu sebesar 0.7165 termasuk dalam kategori baik.

Kata Kunci: Sungai Dengkeng, Limbah Industri Batik, Kualitas Air, Indeks Pencemaran Air

**THE IMPACT OF BATIK INDUSTRY WASTE ON THE WATER QUALITY
OF THE DENGKENG RIVER, PASEBAN VILLAGE, BAYAT DISTRICT,
KLATEN DISTRICT, CENTRAL JAVA PROVINCE**

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ABSTRACT

Bayat District is the center of the batik industry. Batik craftsmen still do not manage their waste using Waste Water Disposal Installations (IPAL). This research aims to reveal the impact of batik industry waste on the water quality of the Dengkeng river. The method used is a survey method to determine the condition of the area around the sample point. Determination of sampling points was carried out using purposive sampling based on the distance from the batik industry waste disposal point in the river to the downstream direction according to the river flow. River water sampling was carried out using the grab sampling technique, namely taking water samples directly. There are 6 samples of river water points representing the Dengkeng River that were selected. The parameters analyzed are physical (temperature, TSS, and TDS) and chemical (pH, BOD, COD, Pb, Cr, DO) parameters. The results of laboratory analysis show that the BOD and COD values at control points, sample points 2 to 5 of Dengkeng River water exceed the quality standards. Sample points 3 and 4 which were contaminated with waste from dense batik industrial areas showed Pb levels that exceeded quality standards and DO that was lower than class 3 quality standards according to Government Regulation Number 22 of 2021. Based on the Pollution Index calculation, the Dengkeng river is included in the lightly polluted category. . The highest Pollution Index value is at sample point 4, namely 4.9199, which is in the lightly polluted category, while the lowest value is at sample point 1, namely 0.7165, which is in the good category.

Keywords: Dengkeng River, Batik Industry Waste, Water Quality, Water Pollution Index