

Intisari

Penilaian Kualitas Air Kali Kuning di Kabupaten Sleman Berdasarkan Indeks Pencemaran Air

Penilaian kualitas air digunakan untuk menentukan kondisi suatu perairan dalam kondisi baik atau buruk akibat pencemaran. Metode Indeks Pencemaran merupakan salah satu cara untuk mengetahui tingkat pencemaran. Penelitian ini bertujuan untuk menilai kualitas air Kali Kuning berdasarkan metode Indeks Pencemaran Air. Penelitian ini dilaksanakan selama bulan Oktober-Desember 2024 dengan pengambilan sampel di 5 titik stasiun yang berbeda. Parameter yang diamati meliputi suhu air, *Total Dissolved Solid* (TDS), pH, *Dissolved Oxygen* (DO), *Biological Oxygen Demand* (BOD), nitrat, dan fosfat. Hasil dari pengamatan kemudian dimasukkan dalam persamaan indeks pencemaran menurut Keputusan Menteri Lingkungan Hidup No. 115 Tahun 2003. Hasil penelitian di Kali Kuning menunjukkan nilai suhu air berkisar 26,46-29,21 °C, TDS 224-305 mg/l, kadar pH 7,7-8,4 mg/l, kandungan oksigen terlarut 6,44-7,62 mg/l, kandungan BOD 3,85-4,48 mg/l, kadar nitrat 0,73-9,49 mg/l, dan kadar fosfat 0,296-0,619 mg/l. Hasil menunjukkan bahwa nilai Indeks Pencemaran Kali Kuning berkisar antara 1,415-2,550. Hasil ini menunjukkan bahwa Kali Kuning berada dalam status tercemar ringan. Kandungan BOD dan fosfat merupakan parameter yang paling mempengaruhi nilai Indeks Pencemaran.

Kata kunci: BOD, fosfat, indeks pencemaran, Kali Kuning, kualitas air

Abstract

Water Quality Assessment of Kuning Stream in Sleman Regency Based on Water Pollution Index

Water quality assessment is used to determine the condition of a water body in good or bad condition due to pollution. The Pollution Index method is one way to determine the level of pollution. This research aims to assess the water quality of Kali Kuning based on the Water Pollution Index method. This research was conducted during October-December 2024 with sampling at 5 different station points. Parameters observed included water temperature, Total Dissolved Solid (TDS), pH, Dissolved Oxygen (DO), Biological Oxygen Demand (BOD), nitrate, and phosphate. The results of the observations were then included in the pollution index equation according to the Decree of the Minister of Environment No. 115 Year 2003. The results of the research in Kali Kuning showed water temperature values ranging from 26.46-29.21 °C, TDS 224-305 mg/l, pH 7.7-8.4 mg/l, dissolved oxygen 6.44-7.62 mg/l, BOD 3.85-4.48 mg/l, nitrate 0.73-9.49 mg/l, and phosphate 0.296-0.619 mg/l. The results show that the Pollution Index value of Kali Kuning ranges from 1.415-2.550. These results indicate that Kali Kuning is in a lightly polluted status. BOD and phosphate content are the parameters that most affect the Pollution Index value.

Keywords: BOD, Kali Kuning, phosphate, pollution index, water quality