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Penilaian Kualitas Air Sungai Ndaru Kecamatan Grabag Kabupaten Magelang berdasarkan Indeks Biotik Famili Makrobentos Periode Oktober-November 2025
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Intisari

Penilaian Kualitas Air Sungai Ndaru Kecamatan Grabag Kabupaten Magelang Berdasarkan Indeks Biotik Famili Makrobentos Periode Oktober-November 2025

Makrobentos merupakan organisme yang hidup di dasar perairan dan memiliki sifat hidup menetap sehingga dapat merespons perubahan kondisi perairan. Indeks biotik famili digunakan untuk menilai kualitas air dengan mengelompokkan taksa berdasarkan nilai toleransi terhadap kondisi perairan. Tujuan dari penelitian ini untuk mengetahui kualitas air Sungai Ndaru berdasarkan nilai indeks biotik famili makrobentos. Penelitian dilaksanakan pada Oktober-November 2025 di empat stasiun pengamatan yang berada dari hulu hingga hilir Sungai Ndaru Kecamatan Grabag Kabupaten Magelang. Parameter kualitas air yang diamati, berupa suhu, kedalaman, kecepatan arus, pH, oksigen terlarut, dan bahan organik. Hasil penelitian didapatkan makrobentos sebanyak 1.167 individu dari 13 spesies yang termasuk dalam 10 famili dan 3 kelas. Famili terbanyak yang ditemukan adalah Famili Thiaridae dengan Genus Melanoides yang menunjukkan kriteria kualitas air sedang. Tingginya nilai indeks biotik famili dapat dikarenakan masuknya limbah pertanian, rumah tangga, domestik, dan limbah peternakan ke dalam badan air sungai. Nilai indeks biotik famili yang didapatkan sebesar 5,30 yang termasuk ke dalam kategori kualitas air sedang, sehingga menunjukkan bahwa perairan Sungai Ndaru dalam kondisi kemungkinan polusi organik cukup besar.

Kata kunci: indeks biotik famili, kualitas air, makrobentos, Sungai Ndaru

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Abstract

Water Quality Assessment of the Ndaru Stream in Grabag District Magelang Regency Based on the Macrobenthos Family Biotic Index During October-November 2025

Macrobenthos are organisms that live at the bottom of the waters and possess relatively sedentary characteristics which enable them to respond to changes in water conditions. The macrobenthos family biotic index is used to assess water quality by classifying taxa based on tolerance values to water conditions. The purpose of this study was to determine the water quality of Ndaru Stream based on the macrobenthos family biotic index value. The study was conducted from October-November 2025, with four station locations located from upstream to downstream of the Ndaru Stream Grabag District Magelang Regency. The water quality parameters observed were temperature, water depth, current speed, pH, dissolved oxygen, dan organic matter. The results of the study obtained 1.167 macrobenthos individuals from 13 species included in 10 families and 3 classes. The most abundant family identified was Thiaridae, represented by the Genus *Melanoides*, indicating a moderate level of water quality. The high value of the family biotic index can be due to the entry of agricultural waste, household waste, domestic waste, and livestock waste into the river flow. The family biotic index value obtained was 5,30; which is included in the fair category, indicating that the waters of Ndaru Stream, are on condition of possible substantial organic pollution.

Keywords: family biotic index, macrobenthos, Ndaru Stream, water quality