Intisari

Pengukuran kualitas air digunakan untuk menentukan kondisi suatu perairan apakah dalam kondisi baik atau buruk akibat suatu pencemaran. Salah satu cara mengetahui tingkat pencemaran adalah dengan metode indeks pencemaran. Penelitian ini bertujuan untuk mengetahui status mutu air Sungai Tambakbayan Yogyakarta berdasarkan tingkat pencemarannya. Penelitian ini dilaksanakan selama bulan Januari–Maret 2020 dengan pengambilan sampel di 6 titik stasiun yang berbeda. Parameter yang diamati meliputi suhu air, total padatan tersuspensi (TSS), oksigen terlarut (DO), *biochemical oxygen demand* (BOD), pH, dan ammonia (NH_3). Hasil dari pengamatan kemudian dimasukkan dalam persamaan indeks pencemaran menurut Keputusan Menteri Lingkungan Hidup No. 115 Tahun 2003. Hasil penelitian menunjukkan suhu air di Sungai Tambakbayan berkisar antara 26,7-30,1°C, TSS sebesar 639,88-757,50 mg/L, kandungan oksigen terlarut 3,72-6,82 mg/L, kandungan BOD_5 4,56-5,73 mg/L, kadar pH berkisar 6,66-7,18, dan kadar ammonia mencapai 0,002-0,020 mg/L. Hasil menunjukkan bahwa nilai indeks pencemaran sungai ini berkisar antara 4,832-5,092. Hasil ini menunjukkan Sungai Tambakbayan berada dalam status tercemar ringan hingga sedang dan kadar TSS memiliki nilai indeks tertinggi dibandingkan dengan parameter yang lain.

Kata kunci: baku mutu air, indeks pencemaran, kualitas air, Sungai Tambakbayan, TSS

Abstract

Water quality measurement is used to determine the condition of a water, whether it is in good or bad condition due to pollution. One way to determine the level of pollution is the pollution index method. This study aims to determine the status of the water quality of the Tambakbayan River in Yogyakarta based on the level of pollution. This research was conducted during January-March 2020 with sampling at 6 different stations. The parameters observed included water temperature, total suspended solids (TSS), dissolved oxygen (DO), biochemical oxygen demand (BOD), pH, and ammonia (NH_3). The results of the observations were then included in the pollution index equation according to the Indonesian Decree of the Minister of Environment No. 115 of 2003. The results showed that the water temperature in the Tambakbayan River ranged from 26.7-30.1 °C, TSS was 639.88-757.50 mg/L, dissolved oxygen was 3.72-6.82 mg/L, the content of BOD_5 was 4.56-5.73 mg/L, pH levels ranged from 6.66-7.18, and ammonia levels reached 0.002-0.020 mg/L. The results show that the river pollution index value ranges from 4,832-5,092. These results indicate the Tambakbayan River is in a light to moderate polluted status and TSS levels have the highest index value compared to other parameters.

Keywords: pollution index, Tambakbayan River, TSS, water quality, water quality standards