

**RIEKE AGNES NOVEL PUTRI** NIM. 17.03.5.1.1.00026. Tingkat Pencemaran Organik Berdasarkan Konsentrasi *Biological Oxygen Demand* (Bod), *Chemical Oxygen Demand* (Cod), Dan *Total Organic Matter* (Tom) Di Sungai Bancaran, Kabupaten Bangkalan **Haryo Triajie, S.Pi., M.Si**

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### **ABSTRAK**

Aktivitas warga sekitar yang memanfaatkan Sungai Bancaran dan menjadikan sungai sebagai tempat pembuangan sampah atau limbah dapat menyebabkan terjadinya akumulasi bahan organik dalam perairan. Penelitian ini bertujuan untuk mengetahui konsentrasi BOD, COD, dan TOM serta menentukan tingkat pencemaran bahan organik di Sungai Bancaran. Penelitian ini menggunakan metode STORET. Prinsip dari metode STORET yaitu membandingkan antara data kualitas air yang diperoleh dengan baku mutu air yang disesuaikan dengan peruntukannya hal ini guna menentukan status mutu air. Baku mutu yang digunakan yaitu PP No. 82 Tahun 2001 dan PerMenKes No. 416 Tahun 1990. Hasil yang diperoleh lebar sungai berkisar 12,3-17,7 m cenderung meningkat kearah muara sungai, kedalaman berkisar 0,27-1,30 m, jenis substrat yaitu lumpur, kecepatan arus berkisar 0,07- 0,35 m/detik, kecerahan berkisar 20,7-87,3 cm, dan suhu berkisar 27,3- 32,2 °C. Parameter salinitas 0-6 ppt, oksigen terlarut berkisar 5,15-7,01 mg/l, pH berkisar 7,10-7,65 cenderung netral, BOD berkisar ,35-14,42 mg/l, COD berkisar 5,72-39,87, dan TOM 8,44-13,13 mg/l. Sedangkan untuk komposisi jenis fitoplankton terdiri dari kelas Bacillariophyceae, Cyanophyceae, Chlorophyceae, Dinophyceae, dan Euglenophyceae dengan kelimpahan fitoplankton berkisar 8133-13.733 sel/L. Tingkat pencemaran organik di Sungai Bancaran menggunakan metode STORET diketahui tercemar ringan (Kelas B) hingga tercemar sedang (Kelas C).

**Kata Kunci:** BOD, COD, TOM, Bahan Organik, STORET

**RIEKE AGNES NOVEL PUTRI** NIM. 17.03.5.1.1.00026. Level Of Organic Pollution Based On Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), And Total Organic Matter (TOM) Concentration In Bancaran River, Bangkalan District  
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#### **ABSTRACT**

*The activities of local residents who use the Bancaran River and turn the river into a place for garbage or waste disposal can trigger an accumulation of organic matter in the waters. This study aims to determine the concentration of BOD, COD, and TOM and to determine the level of organic matter pollution in the Bancaran River. This study uses the STORET method. The principle of the STORET method is to compare the water quality data obtained with the water quality standards adjusted for this purpose in order to determine the water quality status. The quality standard is used on PP. 82 of 2001 and PerMenKes No. 416 of 1990. The results obtained that the width of the river ranges from 12.3-17.7 m which tends to increase towards the river mouth, the depth ranges from 0.27 to 1.30 m, the type of substrate is mud, the flow velocity ranges from 0.07 to 0.35 m / sec, brightness ranges from 20.7 to 87.3 cm, and temperatures range from 27.3 to 32.2 ° C. The salinity parameters were 0-6 ppt, dissolved oxygen ranged from 5.15 to 7.01 mg / l, pH ranged from 7.10 to 7.65 tended to be neutral, BOD ranged from 35-14.42 mg / l, COD ranged from 5.72 -39.87, and TOM 8.44-13.13 mg / l. Meanwhile, the composition of phytoplankton consists of classes Bacillariophyceae, Cyanophyceae, Chlorophyceae, Dinophyceae, and Euglenophyceae with an abundance of phytoplankton ranging from 8133-13,733 cells / L. The level of organic pollution in the Bancaran River using the STORET method is known to be lightly polluted (B Class) to moderate (C Class).*

**Keywords:** BOD; COD; TOM; organic matter, STORET