

ABSTRAK

KAJIAN EVALUASI KUALITAS AIR DI LINGKUNGAN PABRIK PAKAN TERNAK BERDASARKAN INDEKS PENCEMARAN

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Air merupakan sumber kehidupan yang memiliki peran penting bagi seluruh makhluk hidup. Sungai sebagai salah satu sumber daya air yang rentan terhadap pencemaran. Seiring berkembangnya industri pengolah bahan pakan, memungkinkan semakin kompleksnya permasalahan yang akan terjadi pada lingkungan akibat pencemaran. Penelitian ini bertujuan untuk identifikasi pencemaran air serta penentuan status mutu air sungai disekitar pabrik pakan ternak dengan menggunakan metode Indeks Pencemaran (IP). Penelitian ini dilaksanakan pada bulan November - Maret 2021. Pengambilan serta analisis sampel dilaksanakan oleh teknisi lapangan dari Laboratorium Lingkungan SEAMEO BIOTROP. Evaluasi baku mutu digunakan analisis komparatif menggunakan metode Indeks Pencemaran (IP) dengan baku mutu air kelas III menurut Perda Provinsi Lampung No. 11 Tahun 2012 meninjau parameter fisika (Suhu, Kekeruhan, TDS), kimia (pH, DO, BOD, NO₃, NO₂), dan biologi (*Coliform*, *E.coli*) yang didapat pada pengukuran langsung di lapangan dan hasil uji laboratorium. Berdasarkan hasil analisis kualitas air dan perhitungan status mutu air menurut Keputusan Menteri Lingkungan Hidup Nomor 114 Tahun 2003, status kualitas air Sungai Way Napal di tiga lokasi pengambilan sampel dalam kondisi tercemar dengan nilai Indeks Pencemaran berturut turut 2,60, 1,01 dan 1,88. Indeks Keragaman fitoplankton memiliki nilai H'¹= 0,925-2,278, zooplankton H'¹= 1,334-1,772 dan benthos H'¹= 1,343-1,772 dalam kategori tercemar ringan dan tidak ditemukan spesies plankton yang mendominasi spesies lainnya.

Kata kunci : Kualitas air, Indeks Pencemaran, Limbah Industri

ABSTRACT

STUDY OF WATER QUALITY EVALUATION IN ANIMAL FEED FACTORY ENVIRONMENT BASED ON POLLUTION INDEX

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Water is a source of life that has an important role for all living things. Rivers as one of the water resources that are vulnerable to pollution. Along with the development of the feed processing industry, it is possible for the increasingly complex problems that will occur in the environment due to pollution. This study aims to identify water pollution and determine the status of river water quality around the animal feed factory using the Pollution Index (IP) method. This research was conducted in November - March 2021. Sampling and analysis were carried out by field technicians from the SEAMEO BIOTROP Environmental Laboratory. Evaluation of quality standards used comparative analysis using the Pollution Index (IP) method with class III water quality standards according to Lampung Provincial Regulation No. 11 of 2012 reviewed the physical parameters (Temperature, Turbidity, TDS), chemical (pH, DO, BOD, NO₃, NO₂), and biology (Coliform, E.coli) obtained from direct measurements in the field and laboratory test results. Based on the results of the analysis of water quality and the calculation of water quality status according to the Decree of the Minister of the Environment Number 114 of 2003, the water quality status of the Way Napal River at the three sampling locations was in a polluted condition with a Pollution Index value of 2.60, 1.01 and 1, respectively. 88. Phytoplankton Diversity Index has a value of H'¹= 0.925-2.278, zooplankton H'¹= 1.334-1.772 and benthos H'¹= 1.343-1.772 in the lightly polluted category and no plankton species are found that dominate other species.

Keywords: Water Quality, Pollution Index, Industrial Waste