

INTISARI

Pertiwi, D. 2020. *Analisis Air Limbah PT. Indofood Sukses Makmur Tbk, Divisi Mi Instan Semarang Jawa Tengah*. "Karya Tulis Ilmiah", Program Studi D-III Analis Kimia, Fakultas Teknik, Universitas Setia Budi Surakarta.
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Industri mi instan menghasilkan limbah baik limbah padat, cair maupun gas. Limbah yang dihasilkan dapat menimbulkan masalah dalam penanganan karena mengandung karbohidrat, protein, lemak garam-garam mineral maupun sisa-sisa bahan kimia yang digunakan dalam proses produksi dan pembersihan.

Air limbah industri mi instan mengandung zat organik yang tinggi, apabila dibuang ke sungai ataupun badan air dapat menyebabkan berkurangnya jumlah oksigen terlarut. Adanya senyawa-senyawa organik tersebut menyebabkan limbah cair industri mi mengandung *Biological Oxygen Demand* (BOD₅), *Chemical Oxygen Demand* (COD) dan *Total Suspended Solid* (TSS) yang tinggi.

Berdasarkan hasil analisis yang dilakukan pada 4 sampel air limbah PT. Indofood diperoleh kadar TSS pada sampel 1, 2, 3 dan 4 berturut-turut sebesar 12 mg/L; 57 mg/L; 38 mg/L dan 90 mg/L. kadar BOD₅ dari 4 sampel yang diperiksa sampel 1, 2 dan 3 semua mendapatkan hasil sebesar 10 mg/L, sedangkan sampel 4 memiliki kadar sebesar 15 mg/L. Kadar COD sampel 1, 2, 3 dan 4 berturut-turut diperoleh 25 mg/L; 108 mg/L; 126 mg/L dan 159 mg/L. Dari hasil yang diperoleh dapat disimpulkan bahwa sampel air limbah yang dianalisis memiliki kadar TSS, kadar BOD₅ dan kadar COD sampel 1 yang telah memenuhi baku mutu, sedangkan kadar COD sampel 2, 3 dan 4 masih melebihi baku mutu Perda Jateng No. 5 tahun 2012 Tentang Perubahan Atas Peraturan Daerah Provinsi Jawa Tengah Nomor 10 Tahun 2004 Tentang Baku Mutu Air Limbah.

Kata kunci : Limbah Cair Industri Mi, TSS, BOD₅, COD

ABSTRACT

The instant noodle industry generates waste, both solid, liquid and gas. The resulting waste can cause problems in handling because it contains carbohydrates, proteins, mineral fat salts as well as the remnants of chemicals used in the production and cleaning process. Instant noodle industrial wastewater contains high organic substances, if discharged into rivers or water bodies can cause a decrease in the amount of dissolved oxygen. The presence of these organic compounds causes industrial wastewater to contain high Biological Oxygen Demand (BOD₅), Chemical Oxygen Demand (COD) and Total Suspended Solid (TSS). Based on the results of the analysis carried out on 4 samples of PT. Indofood obtained TSS levels in samples 1, 2, 3 and 4 of 12 mg / L respectively; 57 mg / L; 38 mg / L and 90 mg / L. BOD₅ levels from 4 samples examined samples 1, 2 and 3 all got a result of 10 mg / L, while sample 4 had a level of 15 mg / L. COD levels in samples 1, 2, 3 and 4 were obtained 25 mg / L respectively; 108 mg / L; 126 mg / L and 159 mg / L. From the results obtained, it can be concluded that the analyzed wastewater samples had TSS levels, BOD₅ levels and COD levels in sample 1 that had qualify the quality standards, while COD levels in samples 2, 3 and 4 still exceeded the quality standards of the Central Java Regional Regulation No. 5 of 2012 concerning Amendments to the Regional Regulation of Central Java Province Number 10 of 2004 concerning Wastewater Quality Standards.

Keywords: *Noodle Industrial Liquid Waste; TSS; BOD₅; COD*