

**ANALISIS EFEKTIVITAS PENGOLAHAN LIMBAH CAIR SUSU
PASTEURISASI DENGAN PARAMETER TSS, BOD, COD DAN pH PADA
CV. CITA NASIONAL**

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ABSTRAK

Pengolahan limbah cair pada industri susu di CV. Cita Nasional meliputi pengolahan limbah secara fisika, kimia dan biologi. Cara fisika yakni dengan penyaringan, equalisasi, flotasi, sedimentasi dan karbon arang aktif. Sedangkan cara kimia meliputi koagulasi dan flokulasi menggunakan larutan PAC dan netralisasi menggunakan larutan *caustic soda*. Sedangkan cara biologi yakni dengan menggunakan sistem aerasi lumpur aktif. Pengolahan limbah ini dilakukan guna memenuhi standar baku mutu sehingga aman ketika dibuang ke lingkungan. Parameter yang ada dalam peraturan pemerintah terkait baku mutu limbah cair industri susu menurut Peraturan Gubernur Jawa Tengah No. 5 tahun 2012 meliputi pH, BOD (*Biochemical Oxygen Demand*), COD (*Chemical Oxygen Demand*), dan TSS (*Total Suspended Solids*). Evaluasi penelitian ini bertujuan untuk menganalisis efektivitas sistem pengolahan limbah cair yang ada pada CV. Cita Nasional serta untuk mengetahui dampak yang ditimbulkan dari parameter yang melebihi baku mutu. Dari analisis tersebut diketahui bahwa kandungan parameter TSS masih belum memenuhi baku mutu yang telah ditetapkan. IPAL CV. Cita Nasional hanya menurunkan TSS sebanyak 86,808% dibanding efektivitas standarnya yang bernilai 97,206%. Sedangkan efektivitas pengolahan BOD mengalami penyimpangan menjadi -224,427%. Metode yang digunakan dalam penelitian ini adalah wawancara, observasi, dan studi pustaka. Metode pembahasan yang dilakukan yaitu deskriptif dan kuantitatif yaitu dengan memberi gambaran tentang IPAL CV. Cita Nasional, mengidentifikasi dan membandingkan parameter inlet sebelum pengolahan dengan parameter outlet setelah pengolahan untuk mengetahui tingkat efektivitas proses secara keseluruhan. Kemudian membandingkan parameter *inlet* dengan baku mutu untuk mengetahui efektivitas standarnya.

Kata kunci: Efektivitas, Pengolahan limbah cair, TSS, BOD, COD, pH

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**EFFECTIVENESS ANALYSIS OF PASTEURIZED MILK
WASTEWATER TREATMENT WITH PARAMETERS TSS, BOD, COD
AND pH IN CV. CITA NATIONAL**

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ABSTRACT

Wastewater treatment in CV. Cita National included by physically treatment, chemically treatment and biologically treatment. The wastewater was physically treated by filtration, equalization, flotation, sedimentation and activated carbon. Coagulation and flocculation used PAC and neutralization used caustic soda was included in chemically treatment. While the biologically was treated by activated sludge aeration system. Wastewater was treated in order to fulfill the quality standard, it was made sure that wastewater was safe to streamed out into the environment. Parameters for effluent standards for the dairy industry used from government regulations concerning in Central Java Governor Regulation No. 5, 2012 included by pH, BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand) and TSS (Total Suspended Solids). Evaluation of this research aimed to analyzed the effectiveness of wastewater treatment systems that used in CV. Cita National and to investigated the impact of parameters that exceed quality standards. From this analyzed it was known that the content of TSS parameters still did not fulfill the quality standards. WWTP in CV. Cita National only could reduced TSS as much as 86.808% compared to the effectiveness standards were about 97,206%. While the irregularities of BOD effectiveness processed were became -224.427%. Interviews, observation, and literature were the methods that were used in this research. Descriptive and quantitative were the methods that were used for described the WWTP in CV. Cita National, for identified and compared the inlet parameters before treatment with the outlet parameters after treatment to determined the overall effectiveness process. Then compared the inlet parameters with the parameters quality standard to determined the effectiveness of the standard.

Key word: Effectiveness, Wastewater treatment, TSS, BOD, COD, pH

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