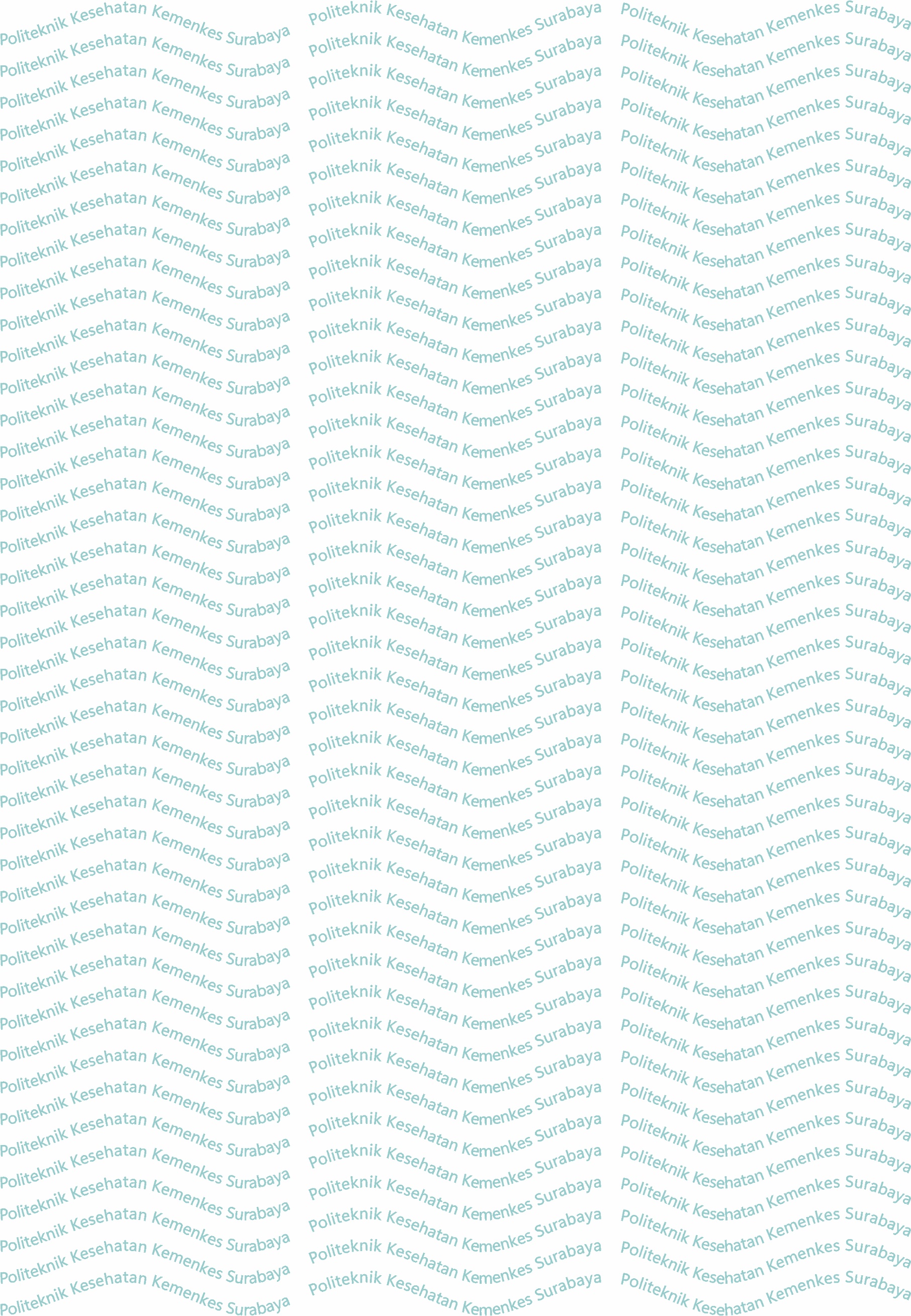
***ABSTRACT***

*Indonesian Ministry of Health*

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*D4 Sanitation*

*Skripsi, August 2024*

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*XV+41 Page+ 2 Picture+2 Table+22 Attachment*

***Efficiency of Hospital Wastewater Treatment Plants Seen from PO4 and NH3-N Parameters in 2023 Case Study of Tk Hospital. III Brawijaya Surabaya***

*Waste is the remainder of a business or activity that contains hazardous or toxic materials which, due to their nature, concentration and amount, can directly or indirectly harm the environment. This research aims to measure and determine the percentage of waste water removal in the inlet section of the tank. primary, secondary basin, tertiary basin, and outlet section and calculate the efficiency of the IPAL at Tk. III Brawijaya Surabaya.*

*Descriptive research is a research method that attempts to describe and interpret objects according to what they are. The population taken was waste water at the Waste Water Treatment Plant (IPAL) at Tk Hospital. III Brawijaya Surabaya. The samples taken for this research were wastewater from the inlet tank, primary tank, secondary tank, tertiary tank and outlet tank at the Waste Water Treatment Plant (IPAL) at Tk Hospital. III Brawijaya Surabaya.*

*The results of this research showed that the average removal percentage for the Phosphate parameter was 70%, and for the Free Ammonia parameter the average removal percentage was 33%. The conclusion obtained is that measurements at the WWTP inlet tank for the PO4 parameter obtained an average result of 0.01 mg/L, while for the NH3-N parameter the average result was 0.9 mg/L. Measurements in the primary tank of the WWTP for the PO4 parameter obtained an average result of 0.01 mg/L, while for the NH3-N parameter the average result was 0.9 mg/L. Measurements in the secondary tank of the WWTP for the PO4 parameter obtained an average result of 0.006 mg/L, while for the NH3-N parameter the average result was 0.9 mg/L. Measurements in the tertiary tank of the WWTP for the PO4 parameter obtained an average result of 0.005 mg/L, while for the NH3-N parameter the average result was 0.8 mg/L. Measurements at the IPAL outlet tank for the PO4 parameter obtained an average result of 0.003 mg/L, while for the NH3-N parameter the average result was 0.6 mg/L. The results of waste water efficiency and wastewater removal percentage on the PO4 parameter showed a removal percentage of 70% and for the NH3-N parameter the removal percentage of 33% was obtained. Suggestions are given to improve wastewater processing and increase the aeration process time and the residence time of the wastewater treatment process.*

*Keywords: Wastewater, WWTP, NH3-N, PO4, Hospital*

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