

FAKULTAS ILMU KESEHATAN

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ABSTRAK

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ANALISIS KANDUNGAN LIMBAH CAIR BERDASARKAN NILAI *BIOCHEMICAL OXYGEN DEMAND (BOD)*, *CHEMICAL OXYGEN DEMAND (COD)* DAN *TOTAL SUSPENDED SOLID (TSS)* DI RUMAH PEMOTONGAN AYAM RPA XY KOTA TASIKMALAYA

Pengolahan air limbah di RPA XY menggunakan instalasi pengolahan air limbah (IPAL) terbuka dengan sistem pengolahan aerob, meskipun pengolahan limbah telah dilengkapi IPAL tetapi masih terdapat parameter limbah yang belum memenuhi baku mutu. Tujuan penelitian ini untuk mendeskripsikan kandungan BOD, COD dan TSS dalam limbah cair di *inlet* dan *outlet* IPAL RPA XY. Penelitian ini merupakan jenis penelitian deskriptif yang dilakukan dengan metode penelitian observasional dan pendekatan *cross sectional*. Populasi dalam penelitian ini air limbah di IPAL RPA XY. Sampel dalam penelitian ini air limbah RPA di *inlet* dan *outlet* IPAL. Pengambilan sampel menggunakan teknik *purposive sampling* dan sistem *grab sampling*. Rata-rata presentase parameter uji dari *inlet* ke *outlet* IPAL mengalami penurunan BOD sebesar 60,44%, COD sebesar 61,27% dan TSS sebesar 63,95%. Secara keseluruhan proses pengolahan pada IPAL dapat mengurangi senyawa organik dan padatan tersuspensi dalam air limbah, tetapi dapat dikatakan IPAL masih kurang efektif dalam menurunkan kandungan parameter limbah yang terlalu besar seperti kandungan BOD dan TSS di *outlet* IPAL yang belum sesuai dengan baku mutu. Diharapkan dapat dilakukan upaya pemisahan isi rumen dan sisa produksi padatan seperti bulu dan ceceran daging/lemak dari sumbernya dikombinasi dengan penanganan limbah padat dan pembuangannya, mengupgrade unit saringan goyang pemisahan minyak, lemak dan padatan sisa produksi dengan bak *grease trap* tertutup serta melakukan pemantauan hasil pengolahan air limbah secara rutin.

Kata Kunci: Limbah cair, RPH, IPAL, *inlet*, *outlet*

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ABSTRACT

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ANALYSIS OF WASTEWATER CONTENT BASED ON BIOCHEMICAL OXYGEN DEMAND (BOD), CHEMICAL OXYGEN DEMAND (COD) AND TOTAL SUSPENDED SOLID (TSS) VALUES IN CHICKEN SLAUGHTERHOUSE RPA XYTASIKMALAYA CITY

Waste water treatment at chicken slaughterhouse RPA XYuses an open waste water treatment plant (WWTP) with an aerobic treatment system, although it has been equipped with an WWTP there are still waste parameters that do not meet quality standards. The purpose of this study was to describe the content of BOD, COD and TSS in wastewater at the inlet and outlet of the WWTP chicken slaughterhouse CV. Sukahati Pratama. This research was a type of descriptive research conducted with observational research methods and a cross sectional approach. The population in this study was wastewater in the WWTP chicken slaughterhouse CV. Sukahati Pratama. The sample in this study was RPA wastewater at the inlet and outlet of the WWTP. Sampling using purposive sampling technique and grab sampling system. The average percentage of test parameters from the inlet to the outlet of the WWTP decreased BOD by 60.44%, COD by 61.27% and TSS by 63.95%. Overall, the treatment process at the WWTP can reduce organic compounds and suspended solids in wastewater, but it can be said that the WWTP is still less effective in reducing the content of waste parameters that are too large, such as the content of BOD and TSS at the outlet of the WWTP which is not in accordance with quality standards. It is expected that efforts can be made to separate the contents of the rumen and residual solids production such as feathers and meat / fat splashes from the source combined with solid waste handling and disposal, upgrade the shaking filter unit to separate oil, fat and residual solids production with a closed grease trap and monitor the results of wastewater treatment regularly.

Keywords: waste water, animal slaughterhouse, WWTP, inlet, outlet