

PROGRAM STUDI KESEHATAN MASYARAKAT (S-1)
UNIVERSITAS BHAKTI KENCANA
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PERBEDAAN VARIASI DOSISI KOAGULAN *POLY ALUMUNIMUM CHLORIDE* DALAM MENURUNKAN KADAR *TOTAL SUSPENDED SOLID* PADA AIR LIMBAH LINEN RUMAH SAKIT X

ABSTRAK

Kegiatan rumah sakit juga menghasilkan limbah padat, cair dan gas dengan karakteristik yang khas. Limbah dari rumah sakit yang tidak sesuai baku mutu dapat berbahaya bagi manusia maupun ekosistem alami. Berdasarkan hasil uji monitoring bulan Februari 2020 dilakukan di Instalasi Pengolahan Air Limbah AOP (*Advance Oxidation Proses*) limbah cair linen di Rumah Sakit X didapatkan kadar *Total Suspended Solid* 48 mg/l hal tersebut tidak memenuhi baku mutu limbah domestik. Tujuan penelitian ini untuk melihat perbedaan dosis koagulan *Poly Aluminium Chloride* dalam menurunkan kadar *Total Suspended Solid* pada air limbah linen rumah sakit X

Penelitian ini menggunakan rancangan *True Experiment* dengan desain *posttest-only control group design* dilakukan 3 perlakuan dosis yaitu 1 gr, 1,5 gr dan 2 gr dengan pengulangan sebanyak 6 kali pada masing masing dosis dan 1 kontrol. Pengumpulan data dilakukan dengan pemeriksaan laboratorium menggunakan alat *Thermohyrometer*, *Jartest*, pH meter dan diperiksa oleh Laboratorium Pengendalian Kualitas Lingkungan Tirtawening Bandung. Analisis data ini menggunakan Uji *Anova One Way*.

Hasil penelitian menunjukkan ada perbedaan melihat perbedaan dosis koagulan *Poly Aluminium Chloride* dalam menurunkan kadar *Total Suspended Solid* pada air limbah linen Rumah Sakit X dengan *p-value* = 0,001 dan dosis paling efektif adalah 1 gr/l dengan keefektifan 87 % dalam menurunkan kadar *Total Suspended Solid*. Saran untuk Rumah Sakit sebagai referensi penggunaan dosis *Poly Aluminium Chloride* untuk mengatasi tingginya kadar *Total Suspended Solid* (TSS)

Kata Kunci: PAC, Dosis Koagulan, Penurunan *Total Suspended Solid* (TSS)
Kepustakaan: 29, 1994-2018

**COMMUNITY PUBLIC HEALTH STUDY PROGRAM (S-1)
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DIFFERENCES IN VARIATION OF COAGULANT POLY ALUMINIUM
CHLORIDE IN REDUCING TOTAL SUSPENDED SOLID WASTE IN
WASTE LINEN WASTE WATER X**

ABSTRACT

Hospital activities also produce solid, liquid and gas waste with distinctive characteristics. Waste from hospitals can be dangerous to humans as well as to natural ecosystems. Based on the results of monitoring tests conducted in February 2020 at the AOP (Advance Oxidation Process) Wastewater Treatment Plant in hospital liquid waste obtained by Hospital Total Suspended Solid 48 mg/l this does not meet the quality standard requirements. The purpose of this study was to look at differences in the dose of Poly Aluminum Coagulant Chloride in decreasing levels of Total Suspended Solid in hospital linen wastewater X

This study used a True Experiment design with a posttest-only control group design that was carried out in 3 treatments, namely 1 gr, 1.5 gr and 2 gr with 6 repetitions for each dose and 1 control. Data collection was carried out by laboratory examination using a Thermohygrometer, Jartest, pH meter and collected by the Tirtawening Environmental Quality Control Laboratory in Bandung. Analysis of this data uses the One Way Anova Test.

The results showed that there was a difference in seeing the difference in the dose of Poly Aluminum Coagulant Chloride in decreasing the level of Total Suspended Solids in hospital wastewater X with p-value = 0.001 and the most effective dose of 1 gram / l with 87% effectiveness in decreasing the total Suspended Solid. Suggestion for Hospitals Made a reference to the use of good doses of Poly Aluminum Chloride to overcome total Suspended Solid (TSS) levels

Keywords: PAC, Coagulant Dosage, Decrease in Total Suspended Solid (TSS)
Literature: 29, 1994-2018