

Abstrak

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**PERBEDAAN KOMPOSISI LIMBAH LUMPUR SEBAGAI PUPUK
TERHADAP KUALITAS KOMPOS (C/N RASIO)
DENGAN PENGOMPOSAN AEROB
DI PT. ABC KOGEN DAIRY**

vi + 50 Halaman + 13 Tabel + 12 Gambar + 11 Lampiran

PP Nomor 101 tahun 2014 tentang pengelolaan limbah B3 menyebutkan bahwa setiap industry mewajibkan memiliki Instalasi Pengolahan Air Limbah (IPAL). Pengolahan air limbah dapat menghasilkan lumpur dari proses pengolahannya. Lumpur yang dihasilkan dari proses pengolahan air limbah memiliki karakteristik B3 ataupun non B3. PT. ABC Kogen Dairy sudah melakukan uji karakteristik B3 dan uji Tc1p organik dan anorganik dan hasilnya tidak mengandung B3. Tujuan penelitian ini adalah untuk mengetahui komposisi lumpur sebagai pupuk dengan metode kompos aerob dengan variasi komposisi lumpur (25%, 35%, dan 45%) terhadap kualitas C/N Rasio. Penelitian berjenis eksperimen dengan sampel penelitian yaitu lumpur dari hasil pengolahan air limbah di PT. ABC Kogen Dairy. Penelitian dilakukan dengan 3 perlakuan dengan masing – masing sebanyak 6 kali. Populasi pada penelitian ini yaitu lumpur hasil pengolahan air limbah PT. ABC Kogen Dairy Hasil dari penggunaan menggunakan limbah lumpur hasil pengolahan air limbah dengan sampel sebanyak 12,6kg. Analisis data yang dilakukan pada penelitian ini di ujnormalitas data menggunakan *Shapiro wilk*, selanjutnya dilakukan uji *Kruskal wallis* karena terdapat data yang tidak berdistribusi normal. Hasil penelitian menunjukkan bahwa nilai rata – rata C/N Rasio pada kompos dengan komposisi lumpur 25% sebesar 30,31, nilai rata – rata C/N Rasio pada kompos dengan komposisi lumpur 35% sebesar 30,50, dan nilai rata – rata C/N Rasio pada kompos dengan komposisi lumpur 45% sebesar 28,84. Hasil C/N Rasio dari ketiga variasi belum memenuhi standar baku mutu. Diharapkan pihak industry dapat menggunakan metode pengomposan pemanfaatan lumpur sebagai kompos agar timbulan lumpur di industry menurun.

DAFTAR PUSTAKA : 23 (1960-2017)

KATA KUNCI : Limbah lumpur, Kompos aerob. Kualitas C/N Rasio

Abstract

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**DIFFERENCES IN THE COMPOSITION OF MUD WASTE AS FERTILIZER
TOWARDS COMPOST QUALITY (C / N RATIO) WITH AEROB
BOOSTING IN PT. ABC KOGEN DAIRY**

vi + 50 pages + 13 tables + 12 picture+ 11 attachments

PP Number 101 of 2014 concerning B3 waste management states that every industry requires a Wastewater Treatment Plant (IPAL). Wastewater treatment can produce sludge from the treatment process. The sludge produced from the wastewater treatment process has B3 or non-B3 characteristics. PT. ABC Kogen Dairy has carried out a B3 characteristic test and an organic and inorganic Telp test and the results do not contain B3. The purpose of this study was to determine the composition of the sludge as fertilizer using the aerobic compost method with variations in the composition of sludge (25%, 35%, and 45%) to the quality of the C / N ratio. The research was an experimental type with a research sample, namely sludge from wastewater treatment at PT. ABC Kogen Dairy. The study was conducted with 3 treatments each 6 times. The population in this study is the sludge from PT. ABC Kogen Dairy. The results of the use of waste sludge from wastewater treatment with a sample of 12.6 kg. Data analysis conducted in this study was tested for data normality using the Shapiro Wilk, then the Kruskal wallis test was carried out because there were data that were not normally distributed. The results showed that the average value of C / N ratio for compost with a sludge composition of 25% was 30.31, the average value of C / N ratio for compost with a sludge composition of 35% was 30.50, and the average value of C / N ratio for compost with a sludge composition of 45% is 28.84. Results of C / N ratio of the three variations did not meet the quality standards. It is expected that the industry can use the composting method of utilizing sludge as compost so that sludge generation in the industry decreases.

REFERENCES : 23 (1960-2017)

KEY WORDS : Waste sludge, Aerobic compost. Quality C / N Ratio