

## ABSTRAK

Kementerian Kesehatan Republik Indonesia  
Politeknik Kesehatan Kemenkes Surabaya  
Program Studi Sanitasi Program Diploma Tiga Jurusan Kesehatan Lingkungan  
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Prista Atma Prabawati

PENGARUH AKTIVATOR EM4 DAN MOL NASI BASI DALAM PROSES  
DEKOMPOSISI KOMPOS LIMBAH SABUT KELAPA MUDA  
(*COCOS NUCIFERA L.*)

xiv + 65 halaman + 15 tabel + 5 gambar + lampiran

Limbah sabut kelapa muda merupakan limbah yang jarang dimanfaatkan sehingga membusuk sekitar kios. Daerah Kota Surabaya jalan Bronggalan, 3 penjual menghasilkan 60 hingga 100 kg limbah, dalam mengatasi tersebut diperlukan pengomposan. EM4 dan MOL nasi basi menjadi alternatif aktivator karena terdapat mikroorganisme yang mampu dekomposisi lignin dan selulosa. Tujuan penelitian yaitu menganalisis pengaruh aktivator EM4 dan MOL nasi basi dalam proses dekomposisi kompos limbah sabut kelapa muda.

Desain penelitian ini menggunakan eksperimen murni dengan rancangan *posttest only control group design*. Objek penelitian yaitu limbah sabut kelapa muda. Analisis data menggunakan uji ANOVA.

Hasil Fosfor, Kalium, C/N rasio telah memenuhi standar SNI 19-7030-2004, namun Nitrogen belum memenuhi standar. Rendahnya Nitrogen dikarenakan kurangnya Nitrogen bahan baku. Hasil pengukuran pH 4-7, suhu 28°C-34°C, kelembaban 47%-80%. Fisik kompos warna hitam, bau tanah humus, tekstur remah. Hasil uji ANOVA yaitu *p value* < 0,05 yang berarti ada pengaruh pemberian aktivator EM4, MOL nasi basi, dan campuran terhadap proses dekomposisi kompos limbah sabut kelapa muda.

Disimpulkan bahwa kompos sabut kelapa muda dengan aktivator campuran lebih efektif dalam dekomposisi ditinjau kandungan N, P, K. Perlu penelitian lebih lanjut kompos sabut kelapa muda dengan bahan nitrogen tinggi seperti kotoran sapi agar meningkatkan kualitas kompos.

Daftar bacaan : 1 SNI + 29 jurnal (2017-2022)

Klasifikasi : -

Kata kunci : *Kompos, Sabut kelapa muda, EM4, MOL nasi basi*

## ABSTRACT

Ministry of Health of the Republic Indonesia  
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Prista Atma Prabawati

### EFFECT OF EM4 ACTIVATOR AND STALE RICE MOLE IN THE DECOMPOSITION PROCESS OF YOUNG COCONUT COIR WASTE COMPOST (*COCOS NUCIFERA L.*)

xiv + 65 page + 15 tables + 5 pictures + appendices

Young coconut coir waste is a waste that is rarely utilized so that it rots around the kiosk. Surabaya City area Bronggalan street, 3 sellers produce 60 to 100 kg of waste, in overcoming this composting is needed. EM4 and MOL stale rice are alternative activators because there are microorganism capable of decomposing lignin and cellulose materials. The purpose of the study was to analyze the effect of EM4 and MOL stale rice activators in the process of decomposition of young coconut coir waste compost.

This research design uses pure experiment with posttest only control group design. The object of research is young coconut fiber waste. Data analysis using ANOVA test.

The results of Phosphorus, Potassium, C/N ratio have met the SNI 19-7030-2004 standard, but Nitrogen has not met the standard. The low Nitrogen is due to the lack of Nitrogen in the raw materials. Measurement results pH 4-7, temperature 28°C-34°C, and humidity 47%-80%. Physical compost black color, smells of humus soil, and has a crumb texture. The result of ANOVA test are *p value* < 0.05, which means that there is an effect of giving EM4 activator, MOL stale rice, and mixture on the decomposition process of young coconut fiber waste compost.

It is concluded that young coconut fiber compost with mixed activators is more effective in decomposition in terms of N, P, K. Further research is needed on young coconut fiber compost with high nitrogen materials such as cow dung to improve the quality of compost.

Reading list : 1 SNI + 29 journals (2017-2022)  
Classification : -  
Keywords : *Compost, Young coconut husk, EM4 activators and local microorganism (MOL) stale rice*