

## FORMULA BIOREMEDIATOR BAKTERI INDIGEN LIMBAH CAIR NANAS DALAM MENDEGRADASI SEDIMEN TAMBAK UDANG

## INDIGEN BACTERIA BIOREMEDIATOR FORMULA OF PINEAPPLE LIQUID WASTE IN DEGRADING SHRIMP POND'S SEDIMENT

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### ABSTRAK

Penelitian ini menggunakan metode eksperimen dengan Rancangan Acak Lengkap (RAL) 5 perlakuan yaitu P1 (3 isolat bakteri), P2 (6 isolat bakteri), P3 (9 isolat bakteri), P4 (12 isolat bakteri), dan P5 (15 isolat bakteri), masing-masing 5 ulangan. Tujuan penelitian ini untuk mengetahui pengaruh formula bioremediasi bakteri indigen LCN pada kualitas pupuk organik yaitu kadar N, P, K, C-Organik, rasio C/N, pH, dan kadar air sedimen tambak udang. Sebanyak 30 sampel masing-masing 50 gram setelah 30 hari difermentasi dianalisis di Laboratorium Kimia Analitik Universitas Muhammadiyah Malang. Hasil penelitian menunjukkan bahwa formula tersebut memberi pengaruh yang signifikan (berbeda nyata) pada kadar N, P, K, C-Organik, rasio C/N, dan pH, namun tidak memberi pengaruh pada kadar air. Perlakuan yang paling efektif adalah konsorsium P5 dengan hasil N 3,4%, P 2,3%, K 2,7 %, C-organik 32,34%, rasio C/N 9,47, dan pH 6,2.

Kata kunci: pupuk organik, formula bakteri lcn, sedimen tambak udang

### ABSTRACT

*This research used experimental methods with Complete Randomized Design (CRD) 5 treatments, namely P1 (3 bacterial isolates), P2 (6 bacterial isolates), P3 (9 bacterial isolates), P4 (12 bacterial isolates), and P5 (15 bacterial isolates), every 5 replays. The purpose of this study is to determine the influence of indigen bacterial bioremediator formula of LCN on the quality of organic fertilizers, i.e. level of N, P, K, C-Organic, C/N ratio, pH, and shrimp pond sediment moisture content. A total of 30 samples of 50 grams each after 30 days of fermentation were analyzed at the Analytical Chemistry Laboratory of the Muhammadiyah University of Malang. The results showed that the formula had a significant effect on N, P, K, C-Organic, C/N ratio, and pH levels, but did not affect water content. The most effective treatment is the P5 consortium with A yield of N 3,4%, P 2,3%, K 2,7%, C-organic 32,34%, C/N ratio of 9,47, and pH of 6,2.*

*Keywords: organic fertilizer, lcn bacteria formula, shrimp pond sediment*