

## **ABSTRACT**

### **POTENTIAL OF ORGANIC WASTE FROM TRADITIONAL MARKETS IN BANDAR LAMPUNG AS RAW MATERIALS OF COMPOST AND BIOGAS PRODUCTION**

**By**

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The objectives of this research are to know the potential of organic waste in traditional market in Bandar Lampung that can be used as raw materials of composting, to know the quality of compost that was produced, and the biogas production from composting. This research was done by two steps, (1) measurement the weight and volume of organic waste and (2) compost and biogas production. The data obtained were analyzed by descriptive method that were shown on table and graph. The results showed that the potential of organic waste from five traditional markets in Bandar Lampung are 10.277 ton/day total weight and 43.378 m<sup>3</sup>/day total volume. The characteristics of compost which was produced are temperature 29.75°C, water content 89.41%, pH 5.31, C/N ratio 6.90, N-total 1.79%, phosphor (P) 1.05% and calium (K) 1.15%. The cumulative biogas production from 60 kgs organic waste during 28 days was 55.00 L with composition consist of N<sub>2</sub> 80.603%, CH<sub>4</sub> 5.520% and CO<sub>2</sub> 13.877%. The organic waste from five traditional markets in Bandar Lampung has potential to produce 1.306 ton of compost and 520.02 L of CH<sub>4</sub>.

Keywords: anaerobic, biogas, compost, organic waste.