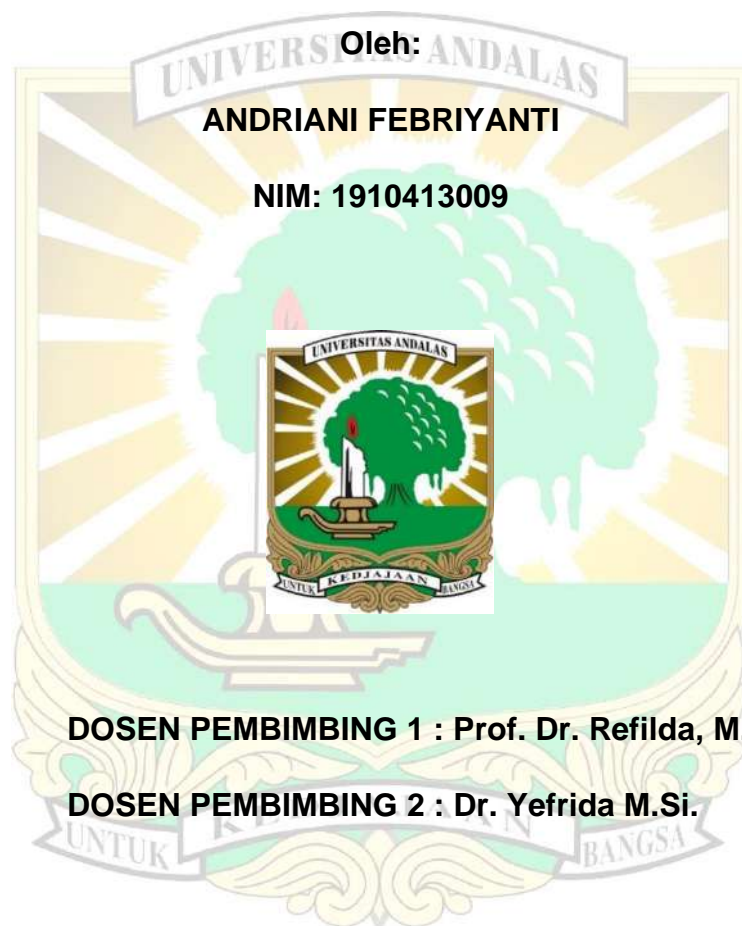


**PEMBUATAN KOMPOS DARI SAMPAH ORGANIK RUMAH TANGGA
DENGAN AKTIVATOR EM-4 DAN ANALISIS FISIKOKIMIANYA SERTA
APLIKASI PADA TANAMAN KANGKUNG SECARA HIDROPONIK**

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ABSTRAK

Making Compost from Household Organic Waste with EM-4 Activator and Its Physicochemical Analysis and Application to Kale Plants Hydroponically

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The more household activities increase, the more waste is produced, causing piles of garbage to decompose, pollute the environment and become a source of disease that has an impact on health problems. Composting is one way to minimize waste piles. Compost was made for 30 days with a composition of 270 g household organic waste and 90 g compost starter (Beraskin) added EM-4 of 0 mL(K1), 25 mL (K2), 50 mL (K3), 75 mL (K4), and 100 mL (K5) with stirring 1x2 days. The resulting compost is assessed by color, smell, texture and its nutrients are determined whether it meets compost standards according to SNI. C-organic treatment was carried out using the Walkey and Black method, the nitrogen (N) Kjeldahl method, phosphorus (P) UV-Vis Spectrophotometry method, K, Fe, Zn Atomic Absorption Spectrophotometry (SSA) method, pH, and C/N. Application of compost to watercress hydroponically was carried out for 28 days with a concentration of 1.5% using the floating raft method and the growth of stem height and number of leaves was observed every week. The best composting conditions were applied to water spinach plants which were obtained at K5, had an earthy smell, soft texture and blackish brown in color. The nutrient content is nitrogen $1.17 \pm 0.09\%$, phosphorus $2.20 \pm 0.08\%$, potassium $1,85 \pm 0.11\%$, C-organic $24.53 \pm 1.69\%$, Fe $0.09 \pm 0.01\%$, Zn $0.01 \pm 0.00\%$, pH 7.46 ± 0.03 and C/N $20.86 \pm 0.04\%$.

Keywords: Compost, EM-4, Hydroponics, Watercress