

ANALYSIS OF THE NITROGEN, PHOSPHOR, AND KALIUM  
CONTENT OF VEGETABLE AND FRUIT WASTE LIQUID  
FERTILIZER WITH EM4 ACTIVATOR TAHUN 2022

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**ABSTRACT**

Household waste consisting of easily decomposed waste, such as leftover food, vegetables and fruits. One of the processing methods that can be done process it into liquid compost. Hence, the purpose of this study was to analyzing liquid organic fertilizer from vegetable and fruit waste with EM4 activator.

The research design used in this study was a quasi-experimental research design with an after only design, in this design the researcher saw the results without measuring the previous state. The object of this research was vegetable waste and fruit waste. The treatments used were 2 variations of EM4 (50 ml and 60 ml) repeated 3 times. The liquid compost produced was subjected to laboratory tests to determine the N, P, and K referring to Menteri Pertanian 261 tahun 2019 concerning regulations for liquid compost.

The addition of EM4 activator still did not meet the standards of Minister of Agriculture Regulation 261 of 2019 concerning liquid organic fertilizer. The highest laboratory results based on variations in the treatment of EM4 activator on sodium (N) content, namely at P3B 60 ml/3 kg at 2.498%, Phosphor (P) at P2B 60 ml/3 kg at 4.116%, Potassium (K) at P2B 60 ml/3 kg is 6.091%. Kruskal Wallis test showed no difference in the content of N, P, and K in each administration of EM4 activator. Suggestions for further research was the addition of other materials that have high nitrogen, phosphor and potassium and have the potential as ingredients in the manufacture of liquid organic fertilizers such as coconut water, molasses, and livestock manure.

Keywords: Effective Microorganism, Liquid Compost, Garbage Waste