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# THE OPTIMIZATION OF THE GROWTH AND QUALITY OF LOCAL MICROALGAE IN VARIOUS WASTEWATER AS MEDIUM

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## THE PURPOSE OF RESEARCH

To find the optimum organic medium for the growth of local microalgae derived from food waste water industry as well as its quality as a supplement source for broiler

***Isolation.*** Microalgae is isolated from fresh water pond near to chicken farm using plankton net. ***Rejuvenation*** 2 ml of microalgae isolates was cultured in erlenmeyer containing 500 ml BBM. ***Growing optimizing and population of microalgae*** in waste water medium. Every medium containts with nutrition of bean sprout extract (M1), tofu waste water (M2), tempe waste water (M3), waste water of poultry feces (M4) with different concentration, which are: 1%, 2%, 3%, 4 %, 5 % ,6 % and ***Determination Quality of chemical contents***, protein level, *fat level, Vitamin A, C and E.*

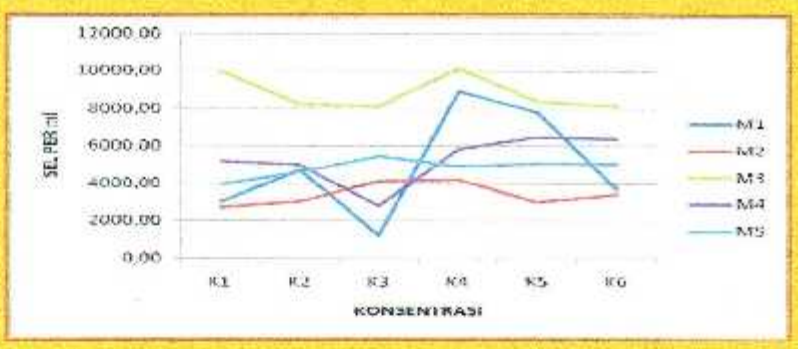


Figure 1. Relation between medium variation and concentration against cell

The highest population was in tempe waste water (M3) amounting 10139.77 cell/ml at 4% concentration at $10^{th}$ day. The increase of medium concetration for more that 4% did not increase cell population. In fact, it tend to decrease. The illustration of relation between media variation and concentration is shown by Figure 1.

Media of bean sprout extract produces highest dry weight which is 13.03 mg/l . The protein was the highest content found Microalgae cultured in tempe waste water which is 63.07%.

The contents of beta carotene, vitamin C and Vitamin E are higher compare to Microalgae cultured in bean sprout waste water.

Tempe Wastewater could use as nutrition during cultivation of local Microalga. The price of waste water medium is cheaper and easy to get and apply by breeder microalgae. It supports the cultivation of production of natural feed supplement.

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