

**KARAKTERISTIK KIMIA DAN MIKROSTRUKTUR GRANULA PATI
TEPUNG TAKA (*Tacca leontopetaloides*)
DENGAN VARIASI PEMUPUKAN**

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INTISARI

Taka (*Tacca leontopetaloides*) merupakan umbi yang mempunyai kandungan karbohidrat tinggi namun belum banyak dimanfaatkan dan dipelajari potensinya. Umbi ini tersebar di daerah pesisir selatan Garut Pulau Jawa. Berdasarkan beberapa hasil penelitian, unsur hara N, P dan K merupakan salah satu unsur yang mempengaruhi kualitas umbi dan pati dari umbi-umbian.

Penelitian ini bertujuan untuk mengetahui karakteristik kimia dan mikrostruktur granula pati pada tepung taka dengan variasi pemupukan serta mengetahui jenis pupuk yang optimum pada umbi taka. Pembuatan tepung taka dilakukan terhadap umbi taka yang diperoleh dari budidaya dengan perlakuan pemupukan yaitu menggunakan pupuk kandang + NPK 50%, pupuk kandang + NPK 100%, pupuk kandang + NPK 50% + POH, pupuk kandang + NPK 100% + POH, nonpupuk (kontrol negatif), dan pupuk kandang (kontrol positif). Selanjutnya dilakukan analisa karakteristik tepung taka terdiri dari analisa kadar protein, kadar lemak, kadar air, kadar abu, kadar karbohidrat, kadar total pati, kadar serat pangan, kadar pati resisten, kadar amilosa dan mikrostruktur granula pati menggunakan *scanning electron microscope* (SEM).

Hasil penelitian menunjukkan bahwa variasi perlakuan pemupukan pada tepung taka mempengaruhi karakteristik kimia karena adanya perbedaan unsur hara N, P dan K yang dibutuhkan umbi taka. Mikrostruktur granula pati pada tepung taka dengan variasi pemupukan tidak mengalami perbedaan sama sekali. Hal ini disebabkan tepung tidak mengalami perlakuan gelatinisasi maupun retrogradasi pati. Jenis pupuk yang optimum dalam menghasilkan tepung taka dengan karakteristik terbaik adalah perlakuan penambahan pupuk kandang + NPK 100% + POH memiliki kadar air 5,86%, kadar abu 2,47%, kadar protein 7,60%, kadar lemak 0,52%, kadar karbohidrat 83,72%, kadar amilosa 29,61%, kadar pati resisten 6,99%, kadar total pati 77,68%, dan kadar serat pangan 10,76%

Kata kunci: *Tacca leontopetaloides*, Pupuk, Karakteristik Tepung

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**CHEMICAL CHARACTERISTICS AND
MICROSTRUCTURES GRANULA STARCH
TAKA FLOUR (*Tacca leontopetaloides*)
WITH FERTILIZING VARIATIONS**

ABSTRACT

Taka (*Tacca leontopetaloides*) is a tuber content has a high carbohydrate it but has not been widely used and studied. These tubers are scattered in the southern coastal area of Garut Island of Java. Based on some research results, nutrients N, P and K is one element that affect the quality of tubers and starches from tubers. The taka tuber has no maturity period nor does it have clear reference guidelines for fertilization. So that required research related to taka bulb characteristics with variation of fertilization. This study aims to determine the chemical characteristics and appearance of starch granules in taka flour with fertilizer variation and to know the optimum type of fertilizer on taka tuber.

This research use taka tuber with 6 variation of fertilizer treatment namely manure + NPK 50%, manure + NPK 100%, manure + NPK 50% + POH, manure + NPK 100% + POH, without fertilizer (negative control), and manure (positive control). Then made taka flour, taka flour characteristic analysis was done, content of protein content, fat content, water content, ash content, carbohydrate content, total starch content, fiber content, resistant starch content, amylose content and starch granule observation.

The results showed that the variation of fertilizer treatment on taka flour influenced chemical characteristics because of the different nutrients N, P and K required taka tuber. The appearance of starch granules in taka flour with variation of fertilization did not experience any difference at all. This is due to the starch does not undergo gelatinisasi treatment or retrogradasi starch. The optimum type of fertilizer in producing taka flour with the best characteristic is the addition of manure + NPK 100% + POH has water content 5,86%, ash content 2,47%, protein content 7,60%, fat content 0,52%, Carbohydrate level 83,72%, amylose content 29,61%, starch resistant content 6,99%, total starch content 77,68%, and food fiber content 10,76%

Keywords: Characteristics of Flour, *Tacca leontopetaloides*, Fertilizer

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