**PENENTUAN KADAR MINERAL KALIUM, KALSIUM DAN MAGNESIUM PADA SARI BUAH LABU SIAM (Sechium edule (Jacq.) Swartz) TUA DAN MUDAMENGGUNAKAN METODE SPEKTROFOTOMETRI**

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**ABSTRAK**

Labu Siam (*Sechium edule* (Jacq.) Swartz) adalah tumbuhan yang berasal dari suku cucurbitaceae. Tanaman ini merupakan sayuran yang tumbuh pada subtropis yang digunakan sebagai makanan dan sekaligus digunakan dalam pengobatan. Labu siam mengandung senyawa-senyawa metabolit sekunder, mineral, dan vitamin. Mineral yang terkandung pada labu siam antara lain kalium, kalsium, magnesium, natrium, posfor, seng, besi dan mangan. Tujuan penelitian ini adalah untuk mengetahui kadar mineral kalium, kalsium, dan magnesium dari labu siam tua dan muda serta untuk mengetahui perbedaan kadar mineral pada labu siam tua dan muda.

Sampel diambil secara sampling purposif di pasar Simpang Limun Medan Amplas, Sumatera Utara. Sampel tersebut terdiri dari labu siam tua dan labu siam muda. Perlakuan sampel dilakukan dengan proses destruksi basah. Penetapan kadar dilakukan dengan menggunakan spektrofotometri serapan atom dengan nyala udara-asetilen. Analisis kuantitatif kalium, kalsium dan magnesium dilakukan pada panjang gelombang berturut- turut 766,5 nm, 422,7 nm dan 285,2 nm.

Hasil penelitian menunjukan bahwa kadar mineral kalium, kalsium, dan magnesium dalam labu siam tua berturut- turut yaitu (2,26742 ± 2,94892) mg/100g, (0,51974 ± 0,59474) mg/100g, (4,19653 ± 5,77771) mg/100g. Kadar mineral kalium, kalsium dan magnesium dalam labu siam muda berturut-turut yaitu (0,43929 ± 0,51419) mg/100g, (0,272706±0,406894) mg/100g, (3,682228± 5,69263)mg/100g.Terdapat perbedaan kadar mineral pada buah labu siam tua dan labu siam muda dimana kadar kalium, kalsium, magnesium pada labu siam tua lebih tinggi dari labu siam muda.

**Kata kunci**: *labu siam, kalium, kalsium, magnesium, spektrofotometri serapan atom.*

**DETERMINATION OF MINERAL LEVELS OF POTASSIUM, CALCIUM AND MAGNESIUM ON SOURCE OF CHAIN ​​FRUIT (Sechium edule)**

**(Jacq.) Swartz) OLD AND YOUNG USING ATOMIC ADsorption SPECTROPHOTOMETRY METHOD**

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Chayote (Sechium edule (Jacq.) Swartz) is a plant that comes from the cucurbitaceae. This plant is a vegetable that grows in subtropics that is used as food and is also used in medicine. Chayote contains secondary metabolites, minerals and vitamins. The minerals contained in chayote include potassium, calcium, magnesium, sodium, phosphorus, zinc, iron and manganese. The objective of the research was to determine the mineral content of potassium, calcium, and magnesium from old and young Chayote and to determine differences in mineral levels in old and young Chayote.

Samples were taken by purposive sampling at the Simpang Limun Market in Medan Amplas, North Sumatra. The sample consisted of old chayote and young chayote. The sample treatment is done by wet destruction process. Determination of the content is carried out using atomic absorption spectrophotometry with an air-acetylene flame. Quantitative analysis of potassium, calcium and magnesium was performed at wavelengths of 766.5 nm, 422.7 nm and 285.2 nm, respectively.

The results showed that the mineral levels of potassium, calcium, and magnesium in old conjoined squash were (2,26742 ± 2,94892) mg/100g, (0,51974 ± 0,59474) mg/100g, (4,19653 ± 5,77771) mg/100g. The mineral content of potassium, calcium and magnesium in young conjoined squash are (0,43929 ± 0,51419) mg/100g, (0,272706±0,406894) mg/100g, (3,682228± 5,69263)mg/100g. There are differences in mineral levels between old chayote and young chayote, where old chayote has higher potassium and calcium levels than young chayote, while the magnesium levels in old chayote is higher than young chayote.

**Keywords** : chayote, potassium, calcium, magnesium, atomic absorption spectrophotometry