

The Influence of cadmium heavy metal on vitamins in aquatic vegetables = Pengaruh logam berat Cd terhadap vitamin sayuran air

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Abstrak

ABSTRACT

Serapan logam berat tiga jenis sayuran air yaitu Genjer (*Limnocharis flava*), Kangkung air (*Ipomoea aquatica* Forsk.) dan Selada air (*Nasturtium officinale* R. Br) diteliti pengaruhnya terhadap kandungan gizinya. Penelitian bertujuan mengidentifikasi logam berat yang berpotensi terakumulasi pada organ sayuran air, dan pengaruhnya terhadap kandungan vitamin A, dan vitamin C. Penelitian Dilakukan pada lingkungan bersih dan tercemar. Data dianalisis dengan One-Way Anova dan uji lanjut LSD untuk mengetahui perbedaan serapan logam, dan vitamin; serta regresi untuk mengetahui kontribusi cadmium dalam mempengaruhi gizi sayuran. Akumulasi pada ketiga jenis sayuran dominan pada akar dan terendah pada daun. Genjer paling tinggi mengakumulasi semua macam logam, selanjutnya kangkung air dan terendah selada air. Cadmium memberi kontribusi pada penurunan vitamin A dan C.

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Abstract

The absorption of cadmium heavy metal in 3 (three) kinds of aquatic vegetables; water lettuce (*Limnocharis flava*), water convolvulus (*Ipomoea aquatic* Forsk.) and watercress (*Nasturtium officinale* R. Br) was studied to determine the influence of the contents of vitamins A and C. The purpose of this research was to identify the accumulation of cadmium in the organs of the aquatic vegetables, and their influence to the contents of vitamins A and C. This research was conducted by employing the factorial experimental design of randomized block design (RBD) with 3 (three) factors. The data was analyzed by regression to detect the correlation and contribution of cadmium influence on the aquatic vegetables. The accumulation of cadmium in the 3 (three) aquatic vegetables was mainly occurred in the stems and leaves. Water lettuce has the highest accumulation of cadmium, followed by water convolvulus and watercress has the least. Cadmium is responsible for the declining levels of vitamins A and C.