

Study on the physiology of environment pollution and the effect of heating on the malathion residue analyzed using radiotracer method

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Abstrak

ABSTRACT

The aim of this study is to determine, the comparison of absorption by aquatic plants *Hydrilla verticillata* and Water hyacinth (*Eichhomia crassipes*) of malathion insecticide residues in water and comparison of malathion concentration

in tissues of fish fed with of contaminated water plants

(Water hyacinth) with tissues

of fish, which was not fed

contaminated water plant. The effect of heating the contaminated

fish tissue, on its level in tissues of rats that consume it.

For the first experiment (aquarium filled with 3 litre of water + *H. verticillata*

100 gr + Water hyacinth 100 gr + 20 μ Ci 14

C-labeled malathion); for the second experiment (the first aquarium filled with 3 litre of water + 30 tails of goldfish + 20 μ Ci 14

C-labeled malathion; second aquarium filled with 3 litre of water + Water hyacinth 100 gr + 30 tail of goldfish + 20 μ Ci 14

C-labeled malathion. For the third experiment (most of contaminated fish tissue in the second experiment was dried

at room temperature and then given to 30 mice and partly heated and then given to another 30

mice). Malathion levels were then analyzed by using a liquid scintillation counter LSC-753 (Aloka). The results of all

treatments were compared using the Student t-test. It can be concluded, *H. verticillata* was more efficient compared to

the enceng gondok in absorbing the insecticide malathion residues in water; malathion concentration in the tissues of

fish fed Water hyacinth was higher than those of fish not fed Water hyacinth; contaminated fish tissue residues of

malathion, although be heated, can not be

lowered significantly, levels in the tissue.