

ABSTRACT

DEGRADATION OF DIAZINON RESIDUE IN HORTICULTURE FARM LAND WITH BIODEGRADATION TECHNIQUE

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The process of diazinon residual degradation can be biologically using degradatory microorganism activity. Microorganism capable to degrade diazinon was found in isolation, the sorting of soil sample in horticulture farming to take soil bacterial isolate of Indonesian environment.

Bacterial isolate on pre test, 3 dominant isolate taken based on the most colony, namely, genus *Bacillus* (B1), *Pseudomonas* and *Bacillus* (B2) that growth well on pH 7 and temperature 27° C. Then, all three bacteria were made in experimentation of diazinon residual degradation being split into individual bacterial treatment, combination of two bacterias and combination of three bacterias. Diazinon residual reduction was measured through Gas Chromatography – FID.

Analysis result shows that diazinon residual reduction by the three bacterias and three series combination was made. Genus *Bacillus* (B1) bacteria more capable to grow in continuous was until day 18 and will degradate diazinon since day 3 in comparison with genus *Bacillus* (B2) and *Pseudomonas*. The combination of genus *Bacillus* (B1) and *Bacillus* (B2) is better in degradating diazinon residual.

Keywords : biodegradation, diazinon, gas chromatography