

BIOREMEDIATION OF PESTICIDE RESIDUES BY *Pseudomonas aeruginosa*.

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ABSTRACT

The study was included isolation and identification of bacterial strains resistant of pyrethroid pesticides (lambde-cyhalothrin, fenvalerate) from agricultural soils in Baquba city. The results appeared that the most of bacteria strain are *Pseudomonas aeruginosa*. All bacterial isolates were identified by the biochemical, cultural and microbial characteristic and then isolated adapted to mineral salt media containing pesticides. The research findings of residue concentration by use HPLC technique that *Pseudomonas aeruginosa* was adapted and growth to concentration Viz. 250µg/ml , 200 µg /ml of (lambde-cyhalothrin, fenvalerate).

The plasmid content of the local isolates was studied and the results showed isolates contain single large plasmid Band, curing was conducted by use of Acridin orange. The plasmids were lost at concentration 1024µg/ml and then isolated adapted to concentration 200µg/ml lambde-cyhalothrin thereafter the culture was assessed by HPLC and results showed the rate of residue concentration in last week was 100% ,it was concluded that the major gene for pesticides degradation was located on plasmid.

Key words: Pesticide , *Pseudomonas aeruginosa* , Bioremediation