MONITORING OF COUNTERFEIT SITUATION OF THE MOST DOMINANT PESTICIDES IN EGYPT.

By

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ABSTRACT

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This study aims to assess Counterfeit Situation of Pesticides in Egypt through monitoring of the counterfeit of a pesticide widely used in Egypt.

23 samples of different pesticide formulations were collected, which include 9 active ingredients to monitor the Situation of pesticide adulteration in the Egyptian market.

There are 20 unregistered samples through Egyptian Agricultural Pesticides Committee thus representing 86.96% of the total tested samples, four samples of them have registration number and the same name as formulations already registered in Ministry of Agriculture representing 20% of the total unregistered samples, These formulations are **(Tinam EC 1.8%), (Mospilan SP 20%), (Score EC 25%)** and **(Dimethoate EC40 EC 40% code27)** the registration numbers of them are (1391), (959), (945) and (1478) respectively. Three samples are **Sardo 25% SC), (Chlorofos EC 48%) and (Ictafos EC 48%)** were expired representing 13.04% of the total tested samples.

When determination the percentage of the active ingredients in the samples under study, the results were as follows, Only two samples with representing 8.69% of the samples under study were within the permissible limits of % a.i, and these samples are **(Tinam EC 1.8%) and (Chlorofos EC 48%)** active ingredient content was 1.53 and 50.355% respectively.

Five samples are (**Farmactine EC 1.8%), (Occidor WP 50%)**, **(diazinon EC 60%), (dozion EC 60%) and (Dimethoate EC40 EC 40% code28)** didn't contain any active ingredient under the condition

analysis. These samples representing 21.74% of the total samples under study.

The percentage of the active ingredient in 16 samples was less than the acceptable limits representing 69.57% of the total tested samples.

The physical properties of the studied samples before and after storage were determined, 17 samples formulated (EC) determined through emulsion characteristics test, six of samples showed good emulsification characteristics before and after storage representing 35.29% of samples formulated (EC) and eleven samples showed poor emulsification characteristics before and after storage representing 64.7% of samples formulated (EC).

Four samples formulated (SP) determined through wet ability characteristics test all samples under testing showed good wet ability characteristics before and after storage representing 17.39% from the total tested samples.

Two samples one of them formulated (WP) and the other formulated (SC), both of them showed good Suspensibility and wet ability characteristics before and after storage representing 8.69% from the total tested samples.

Key words:
Counterfeit Pesticides, Illegal Pesticides, Mass Spectroscopy, IR, Physical properties.

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