شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

بالرسالة صفحات لم ترد بالأصل

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة

INTERACTIONS BETWEEN SOME PESTICIDES RESIDUES AND FOOD ADDITIVES DURING FISH PROCESSING

BY

EMAD MOHAMED ABDEL-HALIEM EL-KHOLIE
B.Sc. Agric. Sci. (Food Technology), Ain Shams Univ., 1989
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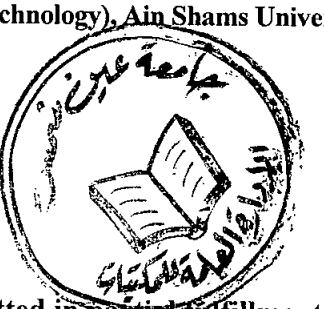

A Thesis submitted in partial fulfillment
of
the requirements for the degree of

DOCTOR OF PHILOSOPHY
in
AGRICULTURAL SCIENCE
(FOOD SCIENCE and TECHNOLOGY)

Department of Food Science
Faculty of Agriculture
Ain Shams University

2000

APPROVAL SHEET

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ABSTRACT

Emad Mohamed Abdel-Haliem El-Kholie, Interaction Between Some Pesticides Residues and Food Additives During Fish Processing, Unpublished Doctor of Philosophy Dissertation, Food Science Dept., Fac. of Agric, Ain Shams Univ., 2000.

The effect of different technological processes (canning, frying, roasting and boiling on pesticides residues in fortified fish species (Sardine, silver carp, grass carp, common carp and catfish) by using three different extraction methods (AOAC, Microwave Solvent Extraction (MSE) and supercritical fluid Extraction (SFE) were studied throughout the present investigation. Data indicated that AOAC method proved superior extraction method followed by SFE and MSE in extracting residues. Technological processes greatly eliminated pesticide from contaminated fish. The rate of elimination of pesticide residues by canning and frying processes was much more greater compared with the other methods.

The accumulation of diazinon and atrazine pesticides in some organs (i.e, muscle tissues, gills, liver, skin and intestinal of tilapia and catfish which exposed to 28 days was studied in the fish aquaria. Data showed that the rate of pesticide accumulation was higher in intestine, followed by liver and gills; whereas the lowest concentration was found in muscle tissue.

Interactions between food additives (sodium chloride, sodium metabisulphite, EDTA and citric acid), pesticide residues and the method of fish processing (canning, salting and freezing) were also considered. Data indicated that canning process with mixture of EDTA + citric acid proved distinguish role in pesticides elimination compared with EDTA or citric acid when used alone. Freezing for one week with sodium metabisulphite caused slight reduction in pesticide residues. On the other hand, salting for 40 days with sodium chloride showed higher elimination of tested pesticide residues.

Key words: Organochlorine insecticides, organophosphorus insecticides, herbicides, carbamates, sardine, grass crap, silver carp, common carp, tilapia, cat fish, canning, roasting frying, boiling, AOAC, MSE, SFE, sodium chloride, sodium metabisulphite, EDTA, citric acid, freezing, salting, extraction.

ACKNOWLEDGEMENT

First and foremost, I'm indebted to ALLAH forever.

The author wishes to express his appreciation and gratitude sincere to Prof. Dr. N.R. Abd El-Rahman, Prof. and Head of Food Science Department, Faculty of Agriculture, Ain Shams University, for her keen supervision, guidance, constructive criticism and every possible help she kindly offered during the course of this investigation.

My great appreciation and thanks to Prof. Dr. Zidan H. Abdel-Hamid, Prof. of Pesticides chemistry, Fac. Agric., Ain Shams Univ. for his continuous supervision, kind help and valuable comments through the course of this study.

Special appreciation and thanks are also extended to Prof. Dr. M.S.A. El-Dashlouty, Prof. Of Nutrition and Food Science, Fac. of Home Economics, Menoufia Univ., for his supervision, constructive criticism and unlimited help during this study.

I am expressing my deepest gratitude to Prof. Dr. Bobby L. Willson, Prof. Of Chemistry, Department of Chemistry, Texas Southern Univ., USA, for setting up the all experiments and providing the chemical analysis facilities and for his supervision of this study.

Finally, I am quite obliged to Dr. Mahmoud A. Saleh, Prof. of Environmental Chemistry, Department of Chemistry, Texas Southern University, USA for kind help and support during experimentation and analysis.