

CHEMICAL EVALUATION AND UTILIZATION OF SOME  
WASTES FROM CANNING INDUSTRY

BY

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A thesis submitted in partial fulfillment

of

the requirements for the degree of

MASTER OF SCIENCE

in

Agriculture

Food Science & Technology

Department of Food Science

Faculty of Agriculture

Ain Shams University

1992

APPROVAL SHEET

Chemical evaluation and Utilization of Some Wastes From  
Canning Industry

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ABSTRACT

Food canning industry produce a large volume of wastes. The wastes of 5 canned products, tomatoes, green peas, green beans, green and orange were studied chemically. Proximate analysis was carried out. The obtained results indicated that moisture percentage average of canned tomatoes, green beans, green and orange products were 4.8, 5.2, 4.4 and 4.7% respectively.

Protein, crude lipids, carbohydrates and ash content of seeds were higher than that of Green seeds. Green seeds showed high levels of crude fibers 71.17%. Tomatoes and green beans seeds showed low levels of crude fibers 1.17% and 1.17% respectively. The results of the study are as follows:

Orange peels contained high value of total carbohydrates, about 70%. The value of extracted pectin was 32% which was similar to standard pectin.

Glutamic was the major amino acid in tomato seeds, apricot and peach kernels. In guava seeds, glycine and isoleucine were the major acids. Tyrosine, tyrosine was low in tomato and guava seeds.

The saturated fatty acids of tomato and guava seeds were 27.55% and 14.68% respectively. The unsaturated fatty acids of tomato and guava seeds, apricot and peach kernels were 73.33, 85.17, 93% and 89.47% respectively.

The number of sterol fractions of tomato and guava seeds, apricot and peach kernels oils were 7, 6, 4 and 5 respectively.

All oils extracted from tomato, guava seeds and apricot, peach kernels were completely free from hydrocyanic acid. HCN. However guava seeds and its flour were free from HCN.

The protein contents were 44.15, 17.41, 56.68, and 51.18% in flours of tomato and guava seeds, apricot and peach kernels respectively.

It was found that the Nitrogen solubility index (NSI), Emulsion capacity (EC) and Foam capacity (FC) in all tested flours increased in acidic and alkaline phase.

#### ACKNOWLEDGEMENT

The author would like to express his sincere gratitude and deep appreciation to Prof. Dr. M. A. El-Samkary, Professor of Food Science, Food Sci. Dept., Fac. of Agric., Ain Shams Univ., for his valuable advices, parental guidance, supervision, and constructive criticism. Sincere appreciation is expressed to Dr. M. G. El Shamey, Assoc. Prof. of Food Sci., in the same department for his supervision and continuous guidance during this work.

Also, Grateful acknowledgment should be extended to Prof. Dr. R. M. Mahmud. Prof. of Food Sci., and Dr. A.A. Abou Arab, Assoc. Prof. of Food Sci., in the same department for their constructive helps through this study.

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# INTRODUCTION

## INTRODUCTION

The processing of many fruit and vegetable products generate waste which could contribute to environmental pollution. Although the food industry has a good record in developing by-products, improvement is possible. The possible utilization of the waste materials of any industry is of a great importance. The fruits wastes seeds of apricot, peach, plum, mango and the citrus seeds are considered a new valuable by-product which could be utilized to obtain valuable products of an economical value. In addition of the usual vegetable fats and oil seeds of stone fruits could be used as a source of oil. Therefore, the production of oil from the seeds of fruits would participate even partially in covering the shortage of edible fats and oils. The white spongy albedo of citrus fruits is a suitable raw material for pectin manufacture. Citrus peel of various origins contains 20-50% pectin. The orange peel is the best sources of pectin and it has a good quality.