

641.395

J78

2003

PROCESSING AND QUALITY CONTROL OPERATIONS
IN THE PRODUCTION OF SHRIMP POWDER
AT FARMTEC FOODS, INC.

T H E S I S

RHEA M. JOSON

*College of Agriculture, Forestry, Environment
and Natural Resources*

CAVITE STATE UNIVERSITY
Indang, Cavite

April 2003

**PROCESSING AND QUALITY CONTROL OPERATIONS
IN THE PRODUCTION OF SHRIMP POWDER
AT FARMTEC FOODS, INC.**

Plant Practice Report
Submitted to the Faculty of
Cavite State University
Indang, Cavite

In partial fulfillment of the
requirements for the degree of
Bachelor of Science in Food Technology



00007096

*Processing and quality control operations
in the production of shrimp powder at
641.395 J78 2003
T-2477*

RHEA M. JOSON
April 2003

ABSTRACT

JOSON, RHEA M. "PROCESSING AND QUALITY CONTROL OPERATIONS IN THE PRODUCTION OF SHRIMP POWDER AT FARMTEC FOODS, INC." Plant Practice Report. Bachelor of Science in Food Technology. Cavite State University, Indang Cavite. April 2003. Adviser: Prof. Fe N. Dimero.

The plant practice was conducted at Farmtec Foods, Inc., (FFI) located at J. P. Rizal St., Sabutan, Silang Cavite from December 11 to March 8, 2003, to expose the trainee to actual quality control operations and processing activities of shrimp powder. The trainee was first oriented with the firm, specifically on its organization and policies and was later involved in operations such as inspection and evaluation of raw materials and sorting efficiency, monitoring the % moisture content, maintaining the drying time, ensuring the final product is in accordance with product specification, label inspection and maintenance of processing condition.

During the plant practice observations were done on how the firm conformed with Good Manufacturing Practices, Hazard Analysis and Critical Control, and Product Quality Accreditation to further improve the product quality. Generally, quality evaluation was conducted in each critical process point of shrimp powder production, from receiving the shrimps to sorting, drying, pulverizing, sifting, packaging storage and finally to distribution. Quality evaluation was based on the physical, organoleptic, chemical and microbial properties of the shrimp at specific point of production, which were compared to both company and federal standards. Specifications set by the costumers/consumers were also conformed with.

Limitations, however, were identified like delayed raw material delivery which resulted to delayed production, lack of ventilation in the production area and insufficient facilities for chemical and microbial analysis.

The plant practice provided the trainee worthwhile experiences which contributed to the development of skills in sampling and physical and sensory evaluation, basic skills which professional food technologists should possess.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL DATA.....	iii
ACKNOWLEDGMENT.....	iv
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
INTRODUCTION	1
Objectives of the Plant Practice	2
Importance of the Plant Practice	2
Time and Place of the Plant Practice	2
Scope and Limitation of the Plant Practice	3
THE COMPANY	4
Vision of the Company	4
Mission of the Company	4
Objectives of the Company	4
Location	5
Historical Background	5
Organization	7
Facilities	9

Products	9
Services Offered	11
Production Policies and Practices.....	11
Market Exposure	12
PLANT PRACTICE EXPERIENCES	14
Pre-Training Activities	14
Observations	15
Receiving and inspection of raw materials	15
Sorting	22
Drying	25
Pulverizing	27
Sifting	27
Packaging	27
Storage	29
Distribution	29
Physico-chemical analysis	29
Microbiological analysis	29
Sensory evaluation	30
Comments and Suggestions	32
Sampling method	32
Sorting	32
Color evaluation	32
Identification of defects	33

Facilities	33
Supervision	33
Reflections/Insights	34
SUMMARY AND CONCLUSION	35
Summary and Conclusion	35
BIBLIOGRAPHY	37
APPENDICES	38

LIST OF TABLES

Table		Page
1	Raw material specifications for sun-dried <i>alamang</i> (FV-100)	19
2	Raw material specifications for sun-dried <i>hipon</i> (FV-130)	20

LIST OF FIGURES

Figure		Page
1	Location map of Farmtec Foods, Inc	6
2	Organizational chart of Farmtec Foods, Inc.	8
3	Plant layout of Farmtec Foods, Inc.	10
4	Different varieties of shrimp	16
5	Process flow and quality control requirements for shrimp powder	17
6	Delivery of sun-dried shrimps in sacks	18
7	Moisture analysis of sun-dried shrimps	18
8	Evaluation report form for raw materials and finished product	23
9	Product specifications of shrimp powder	24
10	Sun-dried shrimps spread in trays and arranged in ovens	26
11	Turning of shrimps in trays and rotating of racks to ensure even drying	26
12	Pulverized shrimps	28
13	Packing of pulverized shrimps in sacks with polyethylene liner.	28
14	Package label of shrimp powder	28

**PROCESSING AND QUALITY CONTROL OPERATIONS
IN THE PRODUCTION OF SHRIMP POWDER
AT FARMTEC FOODS, INC.^{1/}**

Rhea M. Joson

^{1/} A plant practice report presented to the faculty of the Institute of Food Science and Technology, College of Agriculture, Forestry, Environment and Natural Resources, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for graduation with the degree of Bachelor of Science in Food Technology, with Contribution No. FT- PP- 2003- 001. Prepared under the supervision of Prof. Fe N. Dimero.

INTRODUCTION

Farmtec Foods, Inc. (FFI) is well known for producing dehydrated and powdered food ingredients. One of its best selling products is the shrimp powder, which is produced from brackish water reared shrimp, initially sun- dried to maintain its freshness, sorted and dehydrated on stainless steel tray inside cabinet dryers, and pulverized to fine powder. The product is used in the preparation of soup mixes, sauces, and snack foods.

At Farmtec Foods, Inc., quality control program is being implemented, giving emphasis on Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Point (HACCP), and Product Quality Accreditation to ensure the production of good quality food ingredients.

Since one of the major concerns of food technologists is on production and quality evaluation of food, the author, with the kind permission of Farmtec Foods, Inc. was able to observe processing operations and acquire worthwhile experiences and training in the production and quality control of shrimp powder.