

Utilization of Traditional Method of Moringa Shrimp Kropek

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The Problem and Its Background

Introduction

Today, food has become a popular product, especially snack ones. Some of the snacks that are popular in the market are chips and chicharron. One type of chicharron is what we called kropek. Kroepeck or kropek refers to a dried product that is traditionally made from fresh shrimp or fish and ground rice (Espejo, 1998). In the Philippines, it is known as Kropek. In Malaysia Keropok, Puk, Kerupuk or kroepoek in Indonesia and bánhphồngtôm in Vietnam (Iwag, 2016). Kropek is made by combining prawn or shrimp flavoring with water, flour, seasoning, and spices these ingredients are mixed and divided into equal parts, the mixture is dried under the sun or dehydrated to remove the liquid and fried until it expands and become crispy. It is also usually added with powdered seafood such as Fish Protein concentrate (FPC) and shrimp powder. Fish Protein Concentrate (FPC) added to kroepeck increases its protein content relative to its high carbohydrates content (Espejo-Hermes, 1998). However, shrimp heads and minced fish can also be used. The popular type of kropek is prawn-based which is called krupuk udang in Indonesian, (fried prawn crisps) in Chinese, prawn crackers in British English, shrimp chips, or shrimps crackers in American English, and Nuvole di Drago (Dragon's Clouds) in Italian languages. Kroepeck-making added with shrimp is usually prepared using this process: Cleaning and soaking of rice and blanched shrimps overnight, grinding of rice and shrimps into a homogeneous mixture, the addition of salt and lime, steaming, cutting into the desired size, drying thoroughly under the sun or solar dryer to attain a brittle product, frying in deep hot oil until swells and packing in a sealed bag to retain the crispy quality of the product (Agriculture and Fishery Technology, n.d.).

Moringa Shrimp Kropek is not the typical kind of Kropek, it is nutritious because it has a Moringa. WebMD defines Moringa as a plant native to India and other countries. It contains proteins, vitamins and making it useful to fight malnutrition. Moringa is an important food source in some parts of the world. It can be grown cheaply and easily and retains much of its nutritional value when dried. As an antioxidant, it seems to help protect cells from damage might also help decrease inflammation and reduce pain.

The product Moringa Shrimp Kropek uses fresh shrimp wherein shrimp is very nutritious because it is low in calories and provides a high amount of protein and healthy fats, in addition to a variety of vitamins and minerals.

The researchers want to give succor to those parents and entrepreneurs to stand for this product that will satisfy the people in every community, and this is the purpose why we persevered to make this Moringa Shrimp Kropek.

Methods and Techniques of the Study

This study applies an experimental method of research, the method of research involves the manipulation of variables to establish cause and effect relationships. The key features are a controlled method and the random allocation of participants into controlled and experimental group 3 (Mclead, 2012).

Experimental. The researchers gathered some recipe data on the internet until they found the right recipe for the kropek the researchers used moringa and shrimp as the main ingredient of kropek.

Trial and error. In this study, the researchers used the trial-and-error method by getting the right texture and taste until it becomes perfect.

Sanitizing A. First, prepare the equipment and measuring tools b. Second, make sure all the tools and equipment are sanitized and the hands c. had knowledge on how to use tools and equipment.

Selection and Preparation Row materials. The ingredients used in the preparation of moringa shrimp kropek were shrimp, moringa, and soaked rice grains, ¼ small cup of shrimp, ¼ cup leaves of moringa, and 2 cups of rice grains.

The other ingredients are

1 tsp. of salt

1 tsp. ground pepper

3 tsp lime (apog)

2 tbsp. baking powder

Process in Making Moringa Shrimp Kropek

Step 1. Soak 1 cup of rice grains in 1cup of water in about 4 hrs.

Step 2. Ground the soak rice grains, shrimp, and moringa. Make sure that the mixture was at least 2 cups.

Step 3. Mix the ingredients 1 tsp. of salt, ground pepper, and 3 tsp. lime. Dissolve the 3 tsp. of lime or apog in 3 tsp. of water.

Step 4. Prepare the 10 × 10 trays and add ¼ of ground rice, steam for about 2 min.

Step 5. Remove from steamer and cut into the desired size of kropek.

Step 6. Sundry into 2 days.

Step 7. After 2 days the kropek was ready to deep fry. We can produce at least 1kl. Of Moringa Shrimp Kropek.

Presentation, Analysis, and Interpretation of Data

This chapter contains data gathered from the experimental study. These findings were analyzed, interpreted, and tabulated. The discussion and interpretation of the data and results were presented accordingly.

Sensory quality of Moringa Shrimp Kropek

When the questions were prepared the researcher started to do the survey to know it. The survey qualities of Moringa Shrimp Kropek are acceptable in terms of appearance, smell, taste, and texture.

The research has been conducted at the Bulacan State University, Hagonoy Campus, and selected inside the campus laboratory room. Sensory analysis or sensory evaluation is the scientific discipline that applied the principle of experimentation statistical analysis with the use of human senses such as sight, smell, and touch. The product was evaluated using a survey rating based being evaluated.

Presentation of initial Moringa shrimp kropek production using trial and error method

The researcher used the trial-and-error method for the development of Moringa shrimp kropek wherein changes in ingredients amount and the procedures were done to be able to produce a better product in each trial.

First trial

Ingredients

- 2 cup rice (soak overnight)
- ¼ shrimp
- 2 tbsp salt
- 3 stalks of Malunggay leaves
- ¼ Tapioca starch
- ¼ tbsp Garlic powder
- Pinch of ground black pepper
- 1 tsp baking powder
- 1 cup of water

Result

- The Smell is good
- The Taste is greyly
- Appearance looks like 'embutido'
- Texture is tough

Second Trial

- 2 cup rice (soak overnight)
- ¼ shrimp
- 2 tbsp salt
- 1 tbsp lemon juice
- 3 stalks of malunggay leaves
- Pinch of ground black pepper
- 1 tsp baking powder
- 1 cup of water

Result

- The smell is good.
- The taste is tough.
- The appearance is unpleasant and color peach.
- The texture is sticky, then when we fry it was hard.

Final Production of Moringa Shrimp Kropek

Ingredients

- 2 cups of rice
- 1 cup of water
- 2 stalks of malunggay

- ¼ shrimp
- 1 tbsp Lime water
- 2 tbsp salt
- 1 tsp baking powder
- Pinch of ground of pepper

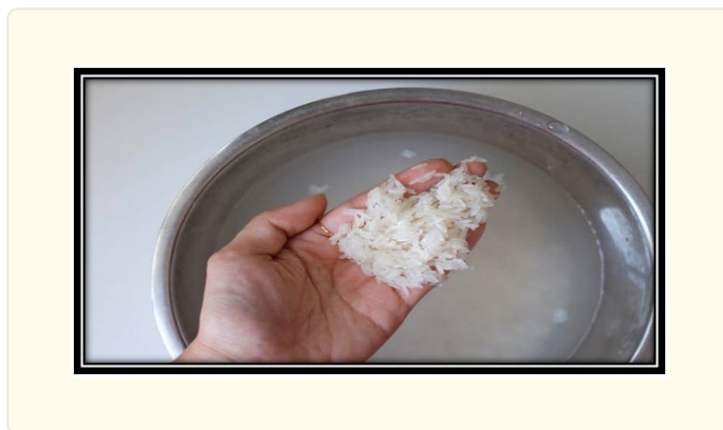
Result

- The is smell is good
- The taste is like a common kropek
- The appearance is good and size
- The texture is crunchy

Procedure

Step 1

Soak 1 cup of rice grains in 1cup of water in about 4 hours.



Step 2

Ground the soak rice grains, shrimp, and moringa. Make sure that the mixture was at least 2 cups.



Step 3

Mix the ingredients 1 tsp. of salt, ground pepper, and 3 tsp. lime Dissolve the 3 tsp. of lime or apog in 3 tsp of water.



Step 4

Prepare the 10x10 trays and add ¼ of ground rice, and steam for about 2 min.



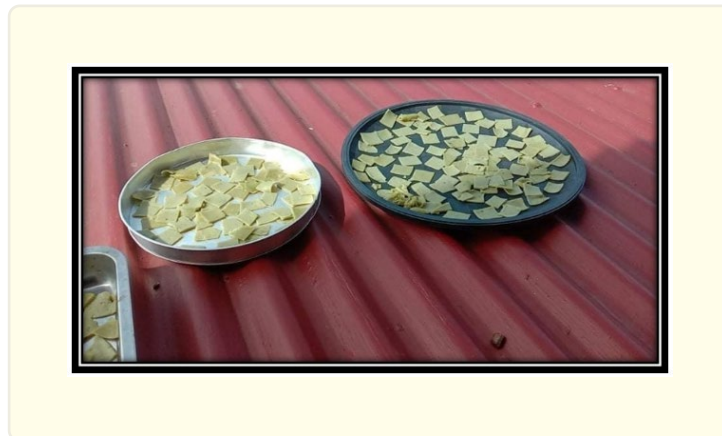
Step 5

Remove from steamer and cut into the desired size of kropek.



Step 6

Sundry into 2 days.



Step 7

After 2 days the kropek was ready to deep fry. We can produce at least 1kilo of moringa shrimp kropek.



<i>Criteria</i>	<i>5</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>Weighted Mean</i>	<i>Verbal Interpretation</i>
Appearance	25	16	10	0	0	4.38	Acceptable
Texture	28	17	5	0	0	4.46	Acceptable
Flavor	27	17	6	0	0	4.42	Acceptable
Smell	28	17	5	0	0	4.46	Acceptable
Grand Mean						4.43	Acceptable

Table 1: Assessment of Entrepreneur Moringa Shrimp Kropek.

Table 1 shows the Assessment of Entrepreneurs on acceptability of Moringa Shrimp Kropek. Appearance, Texture, Flavor and Smell got a weighted mean range from 4.38-4.46 and is interpreted as Acceptable.

The overall evaluation of the Assessment of Entrepreneur Moringa Shrimp Kropek got an average of 4.43 which indicates that the Moringa Shrimp Kropek meet the Satisfaction of Entrepreneur.

<i>Criteria</i>	<i>5</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>Weighted Mean</i>	<i>Verbal Interpretation</i>
Appearance	22	20	8	0	0	4.28	Acceptable
Texture	26	20	4	0	0	4.44	Acceptable
Flavor	20	20	10	0	0	4.2	Acceptable
Smell	20	25	5	0	0	4.3	Acceptable
Grand Mean						4.30	Acceptable

Table 2: Assessment of Parents Moringa Shrimp Kropek.

Table 2 show the Assessment of Parents Moringa Shrimps Kropek. Appearance, Texture, Flavor and Smell got a weighted mean range from 4.2-4.44 and is interpreted as Acceptable.

The overall evaluation of the Assessment of Parents Moringa Shrimp Kropek got an average of 4.30 which indicates that the Moringa Shrimp Kropek meet the Satisfaction of Parents.

Criteria	Producers		Consumers		T-Value	Interpretation	Decision
	WM	SD	WM	SD			
Appearance	4.38	0.7835	4.28	0.6907	0.6313	Acceptable	Accepted
Texture	4.46	0.6966	4.44	0.6439	1.2554	Acceptable	Accepted
Flavor	4.42	0.7024	4.2	0.7559	1.3810	Acceptable	Accepted
Smell	4.46	0.6764	4.3	0.6468	1.0840	Acceptable	Accepted
TOTAL:	4.43	0.7147	4.30	0.6843	1.0879	Acceptable	Accepted

Table 3

Significant Difference in Respondents in the Acceptability of Moring Shrimp Kropek

The table 3 show the Significant Difference in Respondents in the Acceptability of Moringa Shrimp Kropek. In the Criteria it includes the appearance, texture, flavor, and smell where the total weighted mean of producers is 4.43 while the consumer has 4.30 and the total standard deviation in producers has 0.7147 while the consumers is 0.6843. In this table it includes the T-Value where the highest value is Appearance, and the least is the flavor and for the interpretation it is all acceptable and for the decision is all accepted.

Summary of Findings, Conclusion and Recommendations

This chapter discussed the summary of findings from the sensory evaluation of the product, ends drawn from the after effects of the study, and the recommendation for the problems discovered in the study which may help the future researchers with developing another assortment of Utilization of Tradition of Moringa Shrimp Kropeck.

This study was conducted to develop a product utilizing locally abundant resource, particular kropeck. The purpose of this study is to develop a product using shrimp and Moringa leaves to from kropeck.

Aside for the flavor of kropeck the researchers likewise utilized Moringa leaves and shrimp wholesome and medical advantages of moringa leaves and comprised many important vitamins and minerals. The acceptability of the finished product was determined through survey among 215 respondents which is divided into two main groups, the producer and consumer.

Summary

From the analysis of the data presented in the study, the following results were acquired;

1. The ingredients used in the preparation of Moringa-Shrimp Kropek are malunggay leaves, shrimps, rice, lime, baking powder, salt, and ground pepper. The processed used were soaking the rice overnight and grind it with malunggay leaves. After that just mix all the remaining ingredients and steam. Then sun dry for about three to four days and it's ready to fry.
2. The nutrients content found in the product are proteins, vitamins and antioxidant that can acquire in the moringa leaves and protein, healthy fats, vitamins, and minerals from the shrimp.
3. The level of acceptability based on the evaluation of the two hundred fifteen (215) respondents of moringa-shrimp kropek; Appearance with the weighted mean of 4.56, Texture with the weighted mean of 4.52, flavor with the weighted mean of 5.3 and smell with the weighted mean of 4.61 which is interpreted as very acceptable. The total weighted mean of acceptability of the respondents was 4.56 and interpreted as very acceptable.
4. there is a significant difference in the respondents' level of acceptance in terms of sensory level of the product such as appearance, flavor, texture, and smell.

5. The goal of the researcher is for the product to be recognize not just in wet market but also in online market. The marketing strategy that the researcher use is promoting the product online through social media platform such as Facebook page, Instagram and online advertisement.

Conclusion

1. Based on the result that the researcher got, it shows that the Moringa-Shrimp Kropek can be utilized using a traditional way of cooking
2. The Moringa-Shrimp Kropek as per the result of the responses, the sensory quality is all acceptable in terms of appearance, texture, flavor and smell.
3. there is a significant difference in the respondents' level of acceptance in terms of sensory level of the product such as appearance, flavor, texture, and smell.

Recommendation

The propose product: Moringa-Shrimp Kropek was produced. For the development of this product, the researcher recommended other ideas and factors for improving the study as well as foundation for new studies and innovation of these existing study for future researcher.

1. Produce a variety of flavor such as spicy, barbeque and sour and cream etc.
2. Make a suitable condiment for each flavor.
3. The respondents recommended that the packaging and the price need to be affordable for kids' budget.
4. The respondents also recommended that the packaging should be environment friendly.
5. the way of advertising should be relevant and in a way that the new generation can relate or can catch their attention.
6. the research teacher recommended to undergo a microbial test to make sure the products safety.

References

Internet Sources

1. <https://ojs.aaresearchindex.com/index.php/AAJMRA/article/view/10329>
2. https://www.academia.edu/42131293/Fish_Kropek
3. <https://www.scribd.com/document/332228384/11-Fish-Kropek>
4. <http://www.ijrsred.com/volume2/issue4/IJSRED-V2I4P85.pdf>
5. <https://www.scribd.com/document/449834404/VIABILITY-OF-CHESA-KROPEK-FOR-POTENTIA>
6. <https://panlasangpinoy.com/kropek/>
7. <https://pepper.ph/history-kropek/>
8. <https://www.iosrjournals.org/iosr-jestft/papers/vol8-issue11/Version-2/I081124548.pdf>

website

1. Omobuwajo Compositional characteristics and sensory quality of biscuits prawn crackers and fried produced from bead fruit (2003).
2. M Khan and AKMA Nowsad. Development of protein enriched shrimp crackers from shrimp shell wastes (2012).
3. Augustin and Chua etc. Effect of Silicone and Ascorbyl Palmitate on the Quality of Palm Olein Used for Frying of Prawn Crackers (1987).

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