

# Crab shell as an alternative source of flour



**ASSIGN  
BUSTER**

**Abstract**

This study entitled “ Pulverized Crab Shell Flour as a Potential Substitute for The Commercial Flour” has aimed to determine on the effectiveness of Crab Shell as a substitute for flour.

The Researchers want to compare the similarities and differences of the Nutritive Value and Acceptability Level (taste, odor/aroma, color, texture) of Pulverized Crab Shell Flour and Commercial Flour. They used two set up. In set A, Pulverized Crab Shell Flour and in set B, Commercial Flour.

After the experimentation, the Researchers concluded that the Pulverized Crab Shell Flour can be a good and effective substitute for the Commercial Flour. They recommended to used different kind of crab shells as a substitute as future studies. And to have further studies if Pulverized Crab Shell Flour can be a good for big scale production.

**Introduction**

For some people, home baking is an expensive way of cooking because of its expensive ingredients which we want to chance. Some home bakers are very problematic when it comes to flour because nowadays, commercial flour is now becoming more expensive.

Flour weather white or whole meal, supplies a large proportion of the nutrients required by our bodies to ensure growth andhealth.

Flour is used as the basis for many cerealfoodproduct including bread, pasta, pastries, biscuits and cakes. The nutrients is contains are continually supplied throughout an average person’s day. Our breakfast, lunch and

evening meals usually contain products either based on flour, or thickened with flour.

Flour is an excellent source of protein, vitamins, fibre and complex carbohydrates. It is also low in fat and cholesterol.

The Pulverized Crab Shell Flour will now be tested as potential substitute for the Commercialized Flour that we usually need, it will very beneficial. Now, all the crab shell that goes into the trash will not just be wasted but will be used in a purposeful way.

### **Background of the Study**

Mangrove Crabs or Mud Crab (*Scylla Serrata*) crabs that live among mangroves, and may belong to many different species and even families. They have been shown to be ecologically significant in many ways. They keep much of the energy within the forest by burying and consuming leaf litter. Along with burrowing in the ground, this crustacean can climb trees to protect itself. The Hermit crab and the Mangrove crab are the only crustaceans that can climb trees as a defense mechanism. Furthermore, their feces may form the basis of a coprophagous food chain contributing to mangrove secondary production. Mangrove crab larvae are the major source of food for juvenile fish inhabiting the adjacent waterways, indicating that crabs also help near shore fisheries. The crabs themselves are food for threatened species such as the Crab Plover. Their burrows alter the topography and sediment grain size of the mangrove, and help aerate the sediment. Removing crabs from an area causes significant increases in sulfides and ammonium concentrations, which in turn affects the productivity

and reproductive output of the vegetation, supporting the hypothesis that mangrove crabs are a keystone species.

Flour is known to be a good substitute for rice has widely used in different parts of the world. In our country, Philippines, we often import flour from other countries not only for home consumption but also as our source of livelihood especially nowadays by which our country is experiencing food shortage. Flour is a powder made of cereal grains or roots. It is the main ingredients of bread, which is a staple food for many civilization, making the availability of adequate supplies of flour, a major and political issue at various times throughout history. Flour contains a high proportion of starches, which are carbohydrates also known as Polysaccharides.

### **STATEMENT OF THE PROBLEM**

1. Is flour made of Pulverized Crab Shell can be a potential ingredient in making Hot cake?

2. What are the Nutritive Values of Pulverized Crab Shell Flour?

3. How do experts rate the Acceptability Level of Pulverized Crab Shell Flour in making Hot cake in terms of:

- taste

- odor/aroma

- color

- texture

## **SIGNIFICANT OF THE STUDY**

This research aims to help home bakers to have an alternative source of flour when they bake and this also aims for the crab shell to have use and for it not to go to waste.

## **SCOPE AND LIMITATIONS**

The Researchers have limited their study in using only one kind of crab and it is the Mud crab. The time had bounded to two months. In making hot cake (Filipino terms for Pan Cake) they going to used two set up. In set A, Pulverized Crab Shell Flour and in set B, Commercialized Flour. They also included the Nutritive Value and Acceptability Level (taste, odor/aroma, color and texture) as a potential substitute for the Commercialized Flour.

## **METHODOLOGY**

### **Pulverized Crab Shell Flour**

1. Collecting of wasted crabs from a single restaurant named Red Crab House in Villamor Air Base Pasay City.
2. Deactylation of Crabs
3. Cleaning of Crab shells in basin with water and drying it through the process of heating
4. Cooled the Crab shell for about 5 minutes.
5. Using grinder, grind it thoroughly until it turns to pulverized powder.

### **Making Hot Cakes**

1. Use 250 grams of Pulverized Crab Shell Flour. Mixed it to 1/3 cup of evaporated milk, ¼ tsp. of baking powder and 2 beaten eggs, cook for about

2 minutes. After cooking, place it in a clean and dry container and mark set A.

2. Use 250 grams of Commercial Flour. Mixed it to 1/3 cup of evaporated milk, ¼ tsp. of baking powder and 1 beaten egg, cook for about 2 minutes. After cooking, place it in a clean and dry container and mark set B.

## RESULTS AND DISCUSSIONS

This chapter summarizes the collected data, results and discussion. The results straightly answered the entire research questions and research hypothesis.

### COMPARISON OF COMMERCIAL FLOUR AND PULVERIZED CRAB SHELL FLOUR

COMMERCIAL FLOUR	PULVERIZED CRAB SHELL FLOUR
Serving Size:	50g mix
Amount Per Serving	
Calories	180
Calories from Fat	5
% Daily Value	**
Total Fat	0.5g 1%
Saturated Fat	0g 0%
Cholesterol	0mg 0%
Sodium	310mg 13%
Total Carbohydrate	41g 14%
Dietary Fiber	0g
Sugars	20g
Protein	4g

Vitamin		A		34%	
Iron	34	%	Serving	Size:	100g
Amount			Per	Serving	
Calories				87	
Calories		from	Fat	17.	1
%		Daily	Value		**
Total		Fat	1.	9g	2%
Saturated		Fat		0g	0%
Cholesterol			0g		0%
Sodium			0mg		0%
Total		Carbohydrate		0g	0%
Dietary		Fiber		0g	
Sugars				0g	
Protein	17.6g				35%
Fat			19.		5%
Carbs			0		%

## CONCLUSION

AND

## RECOMMENDATION

## CONCLUSION

Based on the study, the Researchers concluded that the Pulverized Crab Shell Flour can be a good and effective potential substitute for the Commercial Flour.

They found out the used of Pulverized Crab Shell Flour safe. In fact, it is natural, non-toxic and non-allergic. The Acceptability Level of Crab Shell Flour in terms of color, odor/aroma, taste and texture is based on the respondent who tested the product.

Read Royal Dutch Shell PESTLE analysis

## RECOMMENDATION

1. To have further studies if it is possible to use different kinds of Crab shells as a substitute in future studies.
2. Further studies if Pulverized Crab Shell Flour can be a good option for a Big Scale Production.
3. To conduct research about the importance of this topic in Economical Development.