

CHAPTER I

INTRODUCTION

1.1 Background of The Study

Crab shells are a potential source of chitin, protein, and minerals that can be used for various applications in food, pharmaceutical and cosmetic industries (Jun et al., 2019). However, due to the fact that plenty of individuals are not aware of the beneficial properties of crab shells or their lack interest in reprocessing them, according to Abdelgalil and Abo-Zaid (2022) crab shells are frequently thrown away and result in a large amount of waste, which can be detrimental to the environment. Therefore, the use of crab shells should be promoted more widely in order to decrease environmental waste and increase recognition of the benefits of crab shells.

Regrettably, the culinary industry's most common execution for crab shells is converting them into flour. Although, when processed properly, crab shells can enhance a dish's flavour and are nutritious enough to be used regularly.

Numerous people use seasoning products to improve the flavour of food and add a pleasant aroma. Chicken- and beef-based seasoning are the ones that the general public is most familiar with. Although the meat of the crab has the strongest flavour, the shells can also impart crab flavour, but the must first be processed with various spices to have a more powerful taste.

Most commercially available powdered broths contain MSG, which some people find to be unhealthy. To create a healthier powdered broth without MSG and without adding any chemicals, a dehydration method can be applied. Dehydration is a method to reduce the water content in a food product (Berk, 2018). The product can last longer without adding artificial preservatives because when it is dehydrated properly, microbes are unable to develop. There are numerous ways to carry out the procedure of dehydrating, and one of them

is by using an electric dehydrator (Willenberg, 2021). According to Dehydrated Foodz, through the use of an electric dehydrator, not only will the product be safe and dry as desired, but the nutrient and vitamin content will not be reduced drastically because the temperature can be adjusted high enough to reduce moisture without killing essential nutrients.

1.2 The Object of The Study

The objectives of the study are:

1. To promote the use of crab shells in the culinary industry as an alternative source of flavour and nutrition also to decrease environmental waste.
2. To provide a healthier powdered broth by creating a product without MSG and artificial preservatives.
3. To apply a dehydration method to the production of crab shell-based broth powder, which will enhance the product's shelf life without the need for artificial preservatives and preserve the nutrient and vitamin content of the products.