

CHAPTER I

INTRODUCTION

1.1 Background of the study

High-protein products, including bars, have recently become extremely popular. In particular, since products enriched in protein or in which protein is the main ingredient, can be used in products intended for a wide group of consumers (Jan Malecki, 2020). Nutrients can be added for a greater physical performance (Schneider & Benjamin, 2011). A nutrient that a great amount of these products contain is protein. Protein is needed for muscles growth and helps the body immune system maintain (Evans, 2004; van der Zanden et al., 2014). Protein can be a source of energy during intense physical training and can help the muscles recover after this training (Hoffman & Maresh, 2011).

This study focuses on the utilization of savory protein bar, specifically exploring the incorporation of chicken breast, pumpkin seeds, edamame, and tempeh as key ingredients. By introducing this savory option, the aim is to provide consumers with a nutritious, protein-rich snack that offers a flavorful departure from traditional sweet protein bars. Through sensory evaluation and nutritional analysis, this study seeks to assess the acceptability and nutritional value of these innovative savory protein bars, contributing to the diversification of the protein bar market and providing consumers with a wider range of healthy snack options.

Chicken breast is an excellent choice for the main ingredient in a savory protein bar due to its high protein content and lean nature, providing a substantial and satisfying base. Its mild flavor complements a variety of additional ingredients, making it versatile for different culinary creations. Incorporating pumpkin seeds, edamame, and tempeh enhances the nutritional profile and flavor complexity of the bar. Pumpkin seeds contribute healthy fats, fiber, and a delightful crunch, while edamame offers plant-based protein, fiber, and essential amino acids. Tempeh, being rich in protein and probiotics, adds

a hearty texture and umami depth. Together, these ingredients create a balanced, protein-packed snack that's both nutritious and delicious.

The methods used to create this product includes dehydrating all the component ingredients on their own to remove the moisture, then combine and steaming the mixed ingredients following by the addition of egg whites as a glue agent to bind all the components together. After that, the process of airfrying is needed as the final step to help create the crispy texture result of the protein bar.

1.2 Objective of the study

The objectives of this study are following below:

1. Comparing the nutritional composition of the savory protein bars with traditional sweet protein bars available in the market, highlighting the differences in protein content, sugar content, and overall nutritional value.
2. Conduct consumer taste testing and sensory evaluation to assess the acceptability of the savory protein bars, considering factors such as flavor, texture, aroma, and overall eating experience.
3. Perform comprehensive nutritional analysis of the savory protein bars to determine their protein content, as well as the levels of essential nutrients, such as vitamins, minerals, and dietary fibers, ensuring they meet dietary recommendations and consumer expectations for a healthy snack option.