

CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

Research into the development of vegetarian abon products made from mandai and oyster mushrooms has successfully created a plant-based food alternative with characteristics similar to conventional abon. Based on sensory tests conducted by 10 panelists, the product received an average rating of 4 out of 5, with aroma being the most well-received aspect (44/50) thanks to the use of traditional spices such as bay leaves, lemongrass, and kaffir lime leaves combined with coconut milk. Nutritionally, the vegetarian mandai and oyster mushroom abon contains 90.52 calories per serving, with significant protein content of 1.46g and dietary fiber of 3.73g. This product has a healthier fat profile compared to conventional meat abon because it is low in saturated fat and cholesterol-free. Mineral content such as calcium (25.35mg), phosphorus (34.05mg), and iron (1.19mg) per serving provides additional nutritional value for consumers.

The production process, which involves temperature control at every stage—from sautéing spices at 75°C to frying at 170°C—has proven effective in producing a product with water activity (aw) of 0.3–0.4, which is safe from the growth of pathogenic microorganisms. The use of aluminum foil pouches with a heat-sealing system maintains product quality for up to one month at room temperature. The success of this research demonstrates that the utilization of local food ingredients such as mandai can serve as an innovative solution in developing sustainable food products while preserving the traditional culinary wisdom of Kalimantan with broader applications.

5.2 Suggestion

For further development of vegetarian floss mandai and oyster mushroom products, formulation optimization is needed by conducting trials varying the ratio of the two main ingredients. Further research should use a factorial

experimental design to evaluate the effect of frying temperature, drying time, and oil type on the sensory characteristics and shelf life of the product. In addition, comprehensive microbiological analysis during storage is needed to validate the claimed one-month shelf life, as well as accelerated testing using the Arrhenius method to predict product stability under various storage conditions.

To improve the quality of the product, it is recommended to reduce the moisture content more optimally because the less moisture content will result in a stronger flavor and a crispier texture. The use of fiber creamer or creamer instead of coconut milk can be an alternative to produce a smoother texture and reduce saturated fat content. Another important aspect is the protection of intellectual property through recipe patents that include ingredient measurements, cooking temperature parameters, and standardized processing time to guarantee product consistency and quality. To increase commercial value, it is recommended to conduct in-depth market research on consumer preferences for spiciness and aroma levels, develop flavor variants, and evaluate environmentally friendly packaging that can support the product's positioning as a sustainable food alternative that promotes local Borneo wisdom.