

CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

The development of gluten-free cookie bites using tofu pulp and whole grains offers a nutritious, functional, and sustainable alternative to conventional cookies. This innovation not only helps reduce food waste by utilizing tofu by-products, but also increases the fiber and protein content of the final product. Based on sensory evaluations, the cookie was well-received in terms of appearance, aroma, and taste. Texture improvements were achieved by adjusting the flour ratio in accordance with gluten-free formulation principles. Each serving of cookie bites contains approximately 150 kcal, making it suitable as a moderate-energy snack for daily consumption. It is also a good source of dietary fiber, derived from whole grains such as oats, quinoa, and barley, and contains no added preservatives, aligning with current health-focus food preference. The product's shelf life is estimated at 2 to 3 months when stored in airtight packaging at room temperature, protected from moisture and direct sunlight. Overall, this cookie product offers a healthier snacking option that supports both consumer wellness and environmental sustainability.

5.2 Suggestion

Future development of this gluten-free cookie can explore variations in sweeteners (e.g., stevia) and fat types (e.g., coconut oil or vegan butter) to accommodate dietary restrictions such as low-sugar or plant-based preferences. Further sensory evaluations with trained panelists and a larger sample size are recommended for more comprehensive product feedback. Additionally, laboratory testing of nutritional content and shelf life through microbial and aw analysis will enhance the scientific reliability and market readiness of the product. Introducing alternative packaging sizes or single-serve options may also improve consumer convenience and expand market reach. By continuing research and refinement, this gluten-free cookie has the

potential to become a competitive, health-oriented snack that aligns with modern dietary trends and consumer expectations.