

I. INTRODUCTION

1.1 Background

Food is anything that comes from biological sources and water, whether processed or not, which is intended as food or drink for human consumers. So that food becomes one of the essential needs for human survival, sources of nutrition and energy are produced from these foods. These include carbohydrates obtained from ingredients such as rice, corn, wheat, mineral sources from drinking water and sources of iodine from table salt and one of the most important nutrients for humans is a source of protein that can be obtained from meat such as chicken, beef and fish.

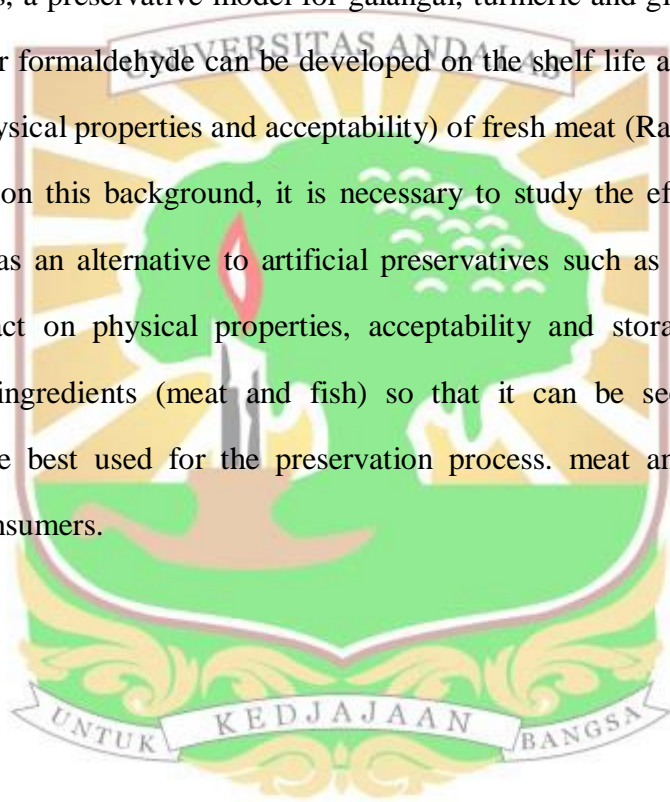
Source of protein as a food ingredient is currently a concern for the community, especially in increasing meat consumption. People have now realized the importance of consuming meat as a source of daily protein. This is indicated by the high desire of the public to buy processed meat products such as nuggets, sausages, and others that are ready for consumption, but the increase in public desire is also followed by public awareness to get good quality meat, including the appearance of color, aroma, taste. , even the high protein content. In fact, meat is a food that is very easily damaged if not handled properly.

Food sources of animal protein such as meat and fish are foods that are very susceptible to denaturation or damage. So it needs efforts to preserve these food ingredients so that they can be accepted by consumers in a condition that is still fit for consumption. Preservation efforts that can be done are actually quite diverse from the use of coolers to natural preservatives. Natural preservation or so-called traditional preservation research has shown that native Indonesian spices and seasonings contain a lot of anti-microbial active substances that have the potential to be used as natural preservatives (Ardiansyah et al., 2003). Among

these natural preservatives are galangal, turmeric and ginger. The essential oil content in galangal and ginger has been shown to have anti-microbial properties (Taechowisman et al, 2004).

The processed form of food that has been tested is beef kalio which can last for 3 days shows that opor spices, fried chicken, rendang, rawon, curry, and curry containing galangal, turmeric and ginger can inhibit the growth of gram-negative and gram-positive bacteria by doses of 10 and 15%. Based on these various studies, a preservative model for galangal, turmeric and ginger extracts as a substitute for formaldehyde can be developed on the shelf life and organoleptic properties (physical properties and acceptability) of fresh meat (Rahayu, 2000).

Based on this background, it is necessary to study the effects of natural preservatives as an alternative to artificial preservatives such as formalin which have an impact on physical properties, acceptability and storage capacity of animal food ingredients (meat and fish) so that it can be seen that natural ingredients are best used for the preservation process. meat and fish and are favored by consumers.



1.2 Formulation of the Problem

The formulation of the problem of this research is:

1. To what extent are the antimicrobial activities of preservatives (garlic, turmeric, lime, salt) on high protein foods (chicken, meat, tofu, eggs, squid, crab, shrimp, sea water fish, freshwater fish).
2. Which natural preservatives (garlic, turmeric, lime, salt, vinegar) are the best for each high protein food ingredient.

1.3. Purpose of the Research

The research objectives are:

1. To determine the microbial activity of natural preservatives (garlic, vinegar, salt, oranges and turmeric).
2. To determine which natural preservatives can inhibit antimicrobial growth in high protein foods.

1.4 Significance of the Research

The benefits of this study are to provide information on the presence of natural antimicrobial preservatives in high protein foods that can be utilized in the food world. Which will be useful for health in the human body.

