

## Raining for the Production of Somay and Herbal Beverages at the Agrotechnology Laboratory of the Faculty of Agriculture, Kediri

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### ABSTRACT

Empowerment of students majoring in Agribusiness, Faculty of Agriculture, UNISKA, is a food processing technology practice activity in a food laboratory. Increasing skills in food processing is very important to add insight in doing business. The aim of the training is to improve creative skills to create new innovations to increase economic value and create job vacancies. Methods of activity are socialization, material counseling and discussion, food processing practices, organoleptic tests, physical tests of the products produced. Parameters measured were steamed somay and fried somay, wedang pokak herbal drink. The results of the organoleptic test for wet somay consumers liked 18 panelists, 0 panelists did not like it, and 7 panelists really liked it. Total panelists 25 people. Almost 96% of panelists liked functional drinks with a score of 20 panelists, really liked 4 people, disliked about 1.

## **INTRODUCTION**

In the era of globalization and the Covid 2020 pandemic, it has had an impact on all aspects including health, economy and trade, industry, education and the service sector as well as a decline in economic value. In overcoming this problem we must be enthusiastic and try our best to improve the economy as a whole. One of the innovations is the processing of herbal drinks and the production of nutritious somay for daily consumption and business. The problem in society is the high unemployment rate with the decline of various business and industrial worlds. Solving the problem is one of them with socialization and skills training as science and technology transfer which is useful for adding new insights in the context of forming independent entrepreneurs with existing facilities. In addition to containing the nutrients the body needs, food also contains bioactive compounds that are needed to maintain a healthy body. Recently it is known that the main cause of degenerative diseases is free radicals. Free radicals are mainly generated in the body from various metabolic processes of nutrients. In sufficient quantities free radicals are needed to fight viruses and bacteria that enter the body.

If the number of free radicals is excessive, it will cause changes in several nutrients that lead to disease (Mary Astuti, 2001). In recent years there has been an increasing interest in obtaining natural antioxidants. Studies show that phenolic compounds such as flavonoids have radical scavenging antioxidant activity (Panovska et al, 2005). The development of functional food is very important so that the population in an area will remain in a healthy condition even though they are already old. With the increasing number of people affected by degenerative diseases and increasing deaths due to heart disease, cancer, diabetes, and so on, more and more research is being carried out to obtain bioactive compounds or functional foods. The benefit of herbal drinks is that they are able to ward off free radicals that come from harmful substances in the environment. The spread of cancer cells to other parts can also be prevented by the antioxidant content found in wedang uwuh. (Afdika, 2022). Chicken meat is a source of animal protein which contains lots of complete amino acids.

Chicken meat can be obtained from livestock chickens which are raised specifically for meat or what is commonly referred to as broiler chickens or chicken pieces. Chicken contains lots of vitamin B6, which the body needs to metabolize carbohydrates, fats and proteins, produce red blood cells, and strengthen the immune system. Chicken can provide you with almost 36% of your entire daily requirement of vitamin B6. Chicken meat is one of the meats that plays an important role in fulfilling the nutritional needs of the community, because it contains a lot of protein and other substances such as fat, minerals, vitamins which are important for smooth metabolic processes in the body. (Rusley, 2018). Siomay is a popular snack because it tastes delicious and chewy. Siomay is made of meat then wrapped in wonton skin. The filling of the meat can also be adjusted according to taste. One of the delicious meats made into dumplings is chicken meat. Siomay is useful for maintaining bone health, making your skin, nails and hair healthier. This is because processed dumplings contain a lot of protein which is healthy for the body, especially for the skin, hair and

nails. The training activities involved students majoring in Agribusiness, Faculty of Agriculture, UNISKA, in the context of practicing processing of agricultural materials with the aim of motivating and training skills in how to make functional food and drinks, namely somay and chicken meatballs so they can be used for business. The benefits of training are increasing human resource skills, providing business opportunities for food self-sufficiency, increasing income, improving health for those who consume it because it is safe and contains good antioxidant and bioactive compounds in boosting immunity and treating disease.

## IMPLEMENTATION AND METHODS

The training activities were held on December 21, 2022, in the food laboratory at the UNISKA Faculty of Agriculture, Kediri. Participants who took part were 28 people, from 8.00 to 14.00 WIB. The materials needed include chicken meat, taiopka flour, salt, sugar, flavoring, granulated sugar, brown sugar, cooking oil, spices, ginger, pandan leaves, kaffir lime leaves, cinnamon, lemongrass leaves, wonton skin, pre-made leaves, , celery. The tools used are heaters, pots, boilers, spoons, scales, knives, cutting boards, plastic containers, baskets, plastic cups, plates. Wok. Grinder/blender. Implementation method as follows:

- a. Making Chicken Somay: Prepare the tools and ingredients, Wash the carrots and leeks, then peel the carrots and grate the carrots then set aside in the basin, don't forget to add the sliced spring onions. Mix the carrots, spring onions and ground chicken meat into a basin, add salt, sugar, flavoring, and sufficient water then stir until evenly combined to form a dough. Prepare the dumpling skins, put the dumpling dough into the wonton skins. Cover the wonton skins so that the dough does not spill over when fried and steamed. At this stage, only water is needed, which is added to the edges of the dumpling skin. Prepare a steamer filled with water and a pan filled with hot oil, then put the dumplings in it. Wait for the dumplings to be cooked, for fried dumplings, wait until they turn brown, then drain. Siomay is ready to be served and enjoyed
- b. Making herbal drinks: Prepare tools and materials. Peel the ginger from the skin, then wash it thoroughly. After that, grind the ginger so that the aroma comes out. Cut the lemongrass stalks and wash them thoroughly, then crush the lemongrass stalks. Then wash the lime leaves, pandan leaves, cinnamon until clean. Then pour the water into the pot. After that put the pot on the stove, then turn on the stove. Put all the ingredients, including brown sugar and white sugar, into a pot filled with water. Then cook until boiling. After boiling, turn off the stove and wait a minute so it doesn't get too hot. After it is not too hot, pour the drink into a plastic cup and the herbal drink is ready to be served

## RESULTS AND DISCUSSION

Socialization and training begins with giving material delivered by resource persons with work procedures and schedules as shown in Figure 1. Participants can ask questions before carrying out food processing technology practicum. The raw materials and tools used have been prepared by the laboratory assistant.



Figure 1. Resource persons and Agribusiness student training participants

Siomay is a semi-moist food that requires good gel formation when making dough so that the ratio of flour and minced meat and the type of flour and type of fish meat used greatly affect its quality, both proximate and organoleptic. proves that the type of meat and the addition of flour affect the quality of meatballs. (Ahmadi, 2007). Dumpling skin is a product made from a mixture of flour, table salt which is then thinned and cut into square shapes. Used to wrap stuffing in dumplings. Dumpling skin has good characteristics, resistant to cracking during freezing, smooth surface and cooking tolerance during the freezing process. There are several factors that affect the quality of dumpling skins including the protein content in salt, the type of starch and wheat flour used, besides that during the manufacturing process such as the time of stirring and the amount of water given. Dumpling skin is a food that is useful for wrapping various fillings. There are many fillings for dumplings, ranging from vegetables, chicken, beef, fish, to minced pork. Dumpling skin comes from processed wheat flour and eggs which are then flattened into various sheets. Dumpling skin is usually made from wheat flour, tapioca flour, margarine and eggs. (Hidayati, 2019). The activity of making somaya can be seen in Figures 2 and 3.



Figure 2. Making Somay with the addition of tapioca flour and spices



Figure 3. The chicken meat mixture is ready for the somay filling

Tapioca flour in the manufacture of dumplings functions as a binder. Tapioca flour contains high amylopectin in the range of 77-80%, so it has the properties of not easily agglomerating, has high adhesiveness, is not easily broken or damaged and the gelatinization temperature of tapioca flour is 69.56 °C. In addition, the addition of tapioca flour can give the dumplings a chewy taste. Tapioca is a starch extracted from the storage root of the cassava plant, a species native to the North and Northeastern regions of Brazil, but its use is now spreading throughout South America. It is a perennial shrub adapted to the hot conditions of the tropical lowlands. In Figure 4 is the result of making somay which is ready to be fried or steamed.



Figure 4. Somay is ready to be processed by steaming or frying

The results showed that the amount of tapioca flour mixture had a very significant effect on water content, fat content, protein content, ash content, and organoleptic values (color, taste and texture). The concentration of sodium nitrate had a very significant effect on the water content, fat content, protein content, and organoleptic values (color, taste and texture) but only had a significant effect on the ash content. (Maharaja, 2008). The use of sugar and salt in making Siomay aims to add flavor. The function of salt in making dumplings is to enhance the savory taste, to generate the taste of other ingredients. Dumplings fried on the wonton skin produce a brownish color with a crispy and crunchy texture, whereas when the dumplings are opened, the inside shows a soft and chewy texture. The steamed dumplings show a white color on the skin of the dumplings after the dumplings are removed from the pan, the inside is also soft and supple. There are several factors that determine the quality of food ingredients including color, taste and nutritional value.

Tapioca flour gives a chewy texture, different from wheat flour. When eaten, siomay has a savory taste produced by the addition of spices in the form of salt, sugar, flavoring, and also pepper. The cooking technique also affects the results of dumplings. When frying fried dumplings, you need to pay attention to the size of the fire. If the fire is too big, the outer skin of the dumplings will cook but the inside will not be cooked. The success rate of this practicum can be seen from the success of students in making herbal drinks independently. Here are the recipes and stages of herbal drinks.

Table 1. Ingredients and Description of Herbal Drinks

No	Herbal Drinks	Description
1	Ginger	The use of ginger as medicine is to improve digestion, increase appetite, strengthen the stomach and prevent infection
2	Cinnamon	Cinnamon makes the taste and aroma of the drink more enjoyable and also has antioxidant properties
3	Lemongrass stalks	Lemongrass stalks are the third ingredient. The benefits of lemongrass include preventing cancer, treating digestive disorders, detoxification, etc.
4	Pandan leaves	Fragrant pandan leaves are used for flavoring, fragrance.
5	The benefits of lime leaves	The benefits of lime leaves come from the content of vitamin C and flavonoids as antioxidants
6	Brown sugar	Brown sugar is made from the main raw material of coconut sap which functions as an aroma and adds a sweet taste
7	White Sugar	White sugar serves to add a sweet taste to herbal drinks

Research conducted by Mahbub et al., 2017 concerning the effect of the proportions of secang and cinnamon on the antioxidant activity of wedang semanis shows that both chemical and organoleptic properties have balanced values in terms of taste, aroma and color. As for ginger, research has been carried out on sensory tests in making wedang uwuh which shows the results are highly favored by the community both in terms of color, taste and aroma (Gelgel et al., 2016). In addition to these various nutrients, lemongrass tea also contains B complex vitamins, vitamin C, zinc, selenium, copper, and manganese. All of these nutrients provide the benefits of lemongrass tea for health. Manufacturing results can be seen in Figures 5 and 6.



Figure 5. Processing of herbal drinks

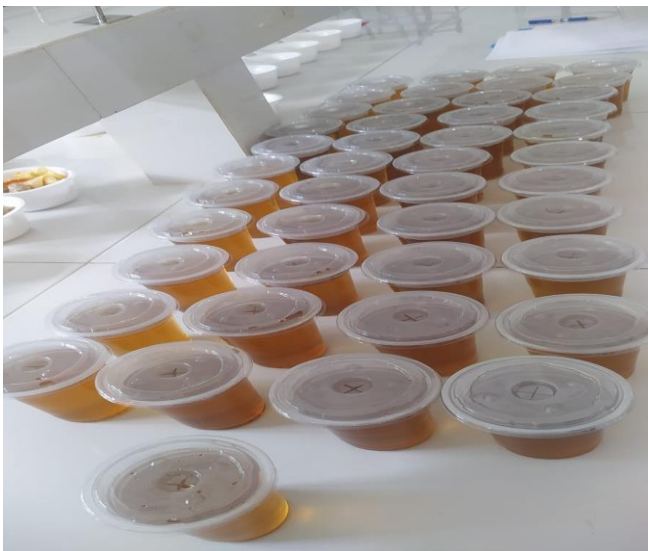


Figure 6. Processed Herbal Drinks

## CONCLUSIONS AND RECOMMENDATIONS

The training is aimed at students of the Agribusiness Department so that they have the skills and knowledge of business knowledge and are beneficial for physical health. The content of antioxidant compounds is quite high in herbal drinks and Somay is also popular with consumers because it tastes delicious and contains good nutritional value

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