ORIGINAL ARTICLE

UTILIZATION OF DAYAK ONION AS HEALTHY SNACKS

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Abstract

In Indonesia, there are an estimated 100 to 150 families of plants, and of that number, most of them have the potential to be used as medicinal plants. The traditional medicinal plant that has a function as a medicinal plant, one of them is Dayak onions, where the onions Dayak is very much found in Kalimantan and is believed to have many health benefits. Dayak onions are very rarely found in the form of snacks, so it is fascinating to be used as research material to get a stick made of Dayak onions with the best flavor, delicious, tasty, crispy, and attractive to be consumed by the consumer. Not only are the Dayak onion sticks delicious and tasty, but they also provide many benefits for those who consume them. This research makes a healthy snack product in the form of sticks made from Dayak onions with rice flour mixture. The method used is the method of case study research to find the best results from multiple comparison Dayak onions and rice flour that has been made, namely 1:1, 1:2, and 1:3. The sampling technique in this study used a purposive sampling technique, which is a sampling technique with specific considerations. Results: From the research on Dayak onion stems made several main comparison ingredients, namely Dayak onions and rice flour which get a savory, savory and crispy taste using 1: 2 or the equivalent of 50gr Dayak onions and 100gr rice flour Recommendation: the products produced still need to be developed in various variants such as spicy, salty and sweet so that consumers are more interested in getting them.

Keywords: Dayak onion, sticks, traditional food ingredients.

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Introduction

Indonesia is some country rich in biodiversity, about 40,000 plant species are found in Indonesia, and 180 species of them are potentially medicinal plants. In Indonesia, it is estimated that there are 100-150 families of plants, and from that amount, most of them have the potential to be used one of them as medicinal plants. Traditional medicinal plants in Indonesia have a significant role, especially for people in rural areas whose health facilities are still limited. In line with scientific principles, conservation efforts need to be carried out by conducting intensive cultivation of plants that are efficacious as drugs to obtain better results from quality and quantity (1).

Traditional medicinal plants that have a function as medicinal plants, one of which is onion Dayak, where Dayak onion is believed to have benefits as a cure for breast cancer by local people of Kalimantan, can overcome abnormalities in the heart, increase endurance, as anti-inflammatory, anti-tumor, and able to stop bleeding (2). In addition, this plant is used as a powerful remedy for all diseases such as stomach ache, diabetes mellitus, reducing cholesterol, and can prevent stroke (1). In addition to being consumed directly or in a fresh condition, Dayak Onions can be made a kind of snack that can be consumed by the people of Indonesia as the times' progress, adult snacks, both traditional snacks, markets, and modern snacks are still very minimal, especially in natural ingredients such as onion Dayak.

Research on Dayak onions has been carried out, including plant bulbs of the genus Eleutherine (Eleutherine bulbosa and Eleutherine Americana), which are known to contain secondary metabolites of the naphthoquinone group (elecanacin, eleutherin, eleuthero, eleuthero) (2). Onion Dayak has anti-cancer and anti-oxidants, which are usually found in vacuole cells in the form of glycosides (3). Some studies also state the content of the active compounds in Dayak onions is extensive, so it is very reasonable for various properties. These compounds include alkaloids, steroids, glycosides, flavonoids, phenolics, tannins, and saponins. One of these compounds, namely flavonoids, can be efficient as anticancer, antiviral, anti-inflammatory, reduce the risk of cardiovascular disease, and free radical catchers (4).

Dayak onions are still very rarely used as processed snacks, but only in the form of tea preparations, where people are not very interested in the preparation. Onion Dayak plays an essential role in health as scientific evidence shows that antioxidant compounds are capable of capturing free radicals by reducing chronic diseases such as cancer and heart. So that they are interested in making a study by testing it to make a food product that is made from Dayak onions with a mixture of rice flour, it is safe for consumption by all the general public, especially in autistic patients.

Dayak onion is used as raw material for sticks because it is easy to get in the North Kalimantan province. It can also be a healthy snack and has unique, exciting, and easy-to-consume flavors for some people who consume and do not consume onions. Especially for people who have special needs such as Autism sufferers who are basically limited to snacks and also cannot consume foods containing gluten and casein. Therefore, this study was conducted to obtain formulations of snack foods from the raw material of Dayak onions with a mixture of rice flour that is healthy and safe for consumption.

Research Methods

Study design

This study uses a qualitative approach with a case study method, which intends to find out the best results from processed Dayak onion sticks with a delicious, tasty, tasty, crunchy, and attractive taste for consumption by consumers and have health benefits.

Sample and sampling technique

Research conducted by Sugiyono, in doing research, must determine the subject of research and find information about problems that exist in the research subjects so that the variables to be studied can be determined. The research subjects in this study were Dayak

onions, which were processed into Dayak onion sticks (mixed with rice flour with a ratio of 1: 1, 1: 2, 1: 3).

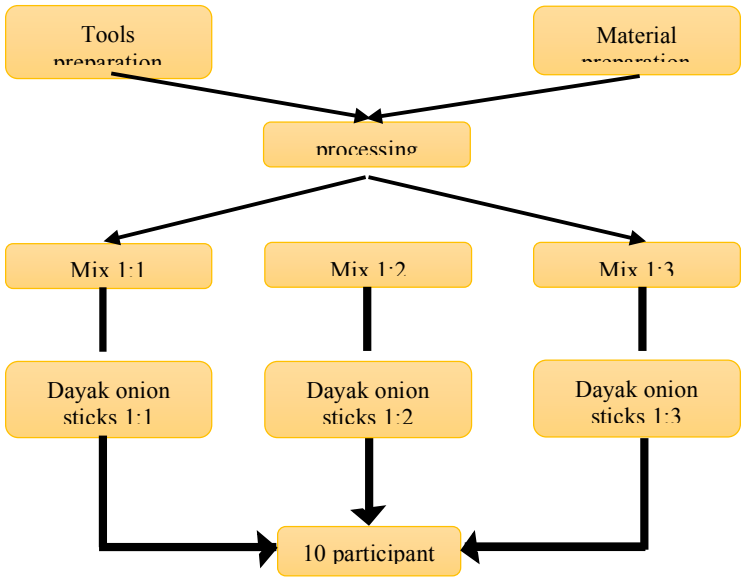
Determination of Informants This study uses purposive sampling technique, according to Sugiyono, is a technique of sampling data sources with specific considerations with inclusion criteria that are suitable with the objectives of the study, including 1) women, 2) able to cook, 3) like to eat snacks like sticks, 4) honest in matters of taste, shape, and packaging.

Instruments and data collection procedure

The research instrument used in this qualitative research was Dayak onion sticks, while the supporting device was a guideline by distributing research questionnaires to respondents who were on the Tarakan University Campus in Kalimantan, totaling 10 participants. Data collection is done to obtain information needed to achieve the objectives of the researcher (6).

Data collection methods were carried out in March 2018. Data collection was conducted by distributing research questionnaires to respondents who were on the University of Tarakan Kalimantan Campus, amounting to 10 participants. Previously, 10 participants were given Dayak onion stick products to be assessed the three comparisons that had been provided

figure 1 sample selection



The way to make Dayak onion sticks starts with the first process, which is to prepare the necessary tools such as scales, knives, knives, plastic basin, grinding, stirring spoon, and stick mill. Preparation of materials for making sticks is divided into three comparisons of the ingredients of Dayak onion and rice flour, namely each Dayak Onion and Rice Flour (50gr: 50gr) [1], (50gr: 100gr) [2], (50gr: 150gr) [3], 1-seeded Egg, two stems Sop leaves, 1 tsp salt, 2 tsp sugar, and enough cooking oil.

Results

Table 1 described the assessment of Dayak onion taste. Participants tested seven characteristics of taste. Detailed explanations were summarized in table 1.

Table 1 Assessment of Dayak onion taste

Characteristics	1:1	1:2	1:3
Delicious	√	√	
Tasteful		√	
Crunchy		√	
Hard	√		√
Tasteless			√
Bitter	√		
Salty	√		

Table 2 described the comparison of Dayak onion sticks taste. The taste was carried out from 10 participants. From the assessment by 10 participants, it has reached saturation data, which shows the best results from the three comparisons in the ratio of 1: 2, because it is more delicious, tasty and crunchy. Detailed explanations were summarized in table 2:

Table 2. Comparison of Dayak onion sticks taste

Participant	1: 1	1: 2	1 : 3
1	Hard, bitter and salty	Delicious, tasty, and crunchy	Hard and tasteless
2	Hard, sour and salty	Delicious, tasty, and crunchy	Hard and tasteless
3	Hard, sour and salty	Delicious, tasty, and crunchy	Hard and tasteless
4	Hard, sour, savory and salty	Delicious, savory, salty and crunchy	Hard and tasteless
5	Hard, bitter and salty	Delicious, tasty, and crunchy	Hard and tasteless
6	Hard, bitter, crunchy and salty	Delicious, tasty, and crunchy	Hard and tasteless
7	Hard, bitter and salty	Delicious, savory, salty and crunchy	Hard and tasteless
8	Hard, bitter and salty	Delicious, tasty, and crunchy	Hard and tasteless
9	Hard, bitter and salty	Delicious, tasty, and crunchy	Hard and tasteless
10	Hard, bitter and salty	Delicious, tasty, and crunchy	Hard and tasteless

Discussion

According to Alves's 2003 research on Dayak onions, which were plant bulbs of the genus Eleutherine (Eleutherine bulbosa and Eleutherine Americana), it was known that they contained secondary metabolites of the naphthoquinone group (elecanacin, eleutherin, eleuthero, and eleutherinon).

The phytochemical test results on Dayak onions showed steroid (-), saponin (-), flavonoids (+++), polyphenols (+++), and alkaloids (+). Fresh Dayak onions have a water content of 62.31%, 6.2% ash content, and vitamin C 16.1 mg / 100gr (7).

Based on the research conducted by Saleh, Dayak onion contains phytochemical compounds in the form of triterpenoids, flavonoids, and phenolics, which can be used as a tumor drug, inflammation, and stop bleeding, facilitate urine (diuretic effect), reduce pain, dysentery medication. The research conducted aims to obtain information about the chemical content and benefits of chemical compounds contained in Dayak onions. Still, until now, there has been no research regarding the supply of food ingredients from onion Dayak as in the form of sticks (8).

Onion Dayak is useful as an alternative medicine that can cure various diseases such as cancer, hepatitis, kidney, heart, gout, diabetes mellitus, and others (9). Therefore, it is necessary to have onion Dayak in the form of food that can be consumed by the community.

The processing of Dayak onions is made from various kinds of food, the essential ingredients of onion Dayak. Both as a pure Dayak onion product and in formulation with other products. One of the products developed is Dayak onion sticks. Sticks are snacks that have been around for a long time with a great appearance with a soft, crisp, savory, tasty texture and come from flour. For mixing the main ingredients of Dayak onion is rice flour containing anthocyanin, which has phenolic compounds and functions as an antioxidant that is very good for human health (10).

According to the results of discussions that have been conducted with 10 participants, there was one best result from 3 comparisons of the Dayak onion sticks. For a ratio of 1: 1 where the doses of each Dayak onion and rice flour are 50gr: 50gr. Research on the first experiment, according to 10 participants, stated that onion Dayak sticks had a bitter, hard, and salty taste. Then, in the second experiment, the comparison of Dayak onions and rice flour (1: 2) or equivalent to 50gr: 100gr. The results of these experiments progressed on Dayak onion stick products because, on average, 10 participants showed good taste results such as delicious, savory, and crunchy. Whereas in the last experiment, a ratio of 1: 3, namely 50g Dayak onion and 150gr rice flour, experienced a drastic decrease with tasteless and hard taste so that consumers were not very interested in consuming Dayak onion sticks in a ratio of 1: 3.

Conclusion

The results of the comparison of Dayak onion sticks that have been rated by 10 participants with criteria that are by the research problem are the best results at a ratio of 1: 2 with a delicious, tasty, and crunchy taste. This delicious Dayak onion stick not only gives satisfaction to the tongue but can also be used as a powerful medicine for all diseases such as stomach ache, diabetes mellitus, reducing cholesterol, and being able to prevent strokes.

Recommendation

The benefits of Dayak onion are no longer in doubt, but only from the products produced still need to be developed by various flavors. Because, onion sticks still lack like one available variant, namely original. In the future, it is expected that Dayak onion sticks can be developed into various flavors such as spicy, salty, and sweet. Hopefully, this information can motivate people to be able to utilize natural resources well and be able to

develop a product that can be beneficial to the community, especially in the health sector, in presenting or promoting an idea.

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