GENJER EXTRACT (*Limnocharis flava*) AS ALTERNATIVE TO PREVENT CONSTIPATION DURING PREGNANCY

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Abstract

Anemia is one of the biggest problems experienced by pregnant women. Anemia that occurs during pregnancy not only affects the mother but also has an impact on the fetus. As for the efforts made by the government to reduce the rate of anemia in pregnant women, namely by giving Fe tablets during pregnancy. During pregnancy, the problem that is often experienced by pregnant women is constipation. To determine the content of the genjer plant (limnocharis flava) as an alternative to prevent constipation during pregnancy. The method used in this study is a qualitative test, this method focuses on the results of the presence or absence of the content contained in the genjer plant. The tests carried out consisted of tests for carbohydrates, protein, fat, crude fiber and water content. From the tests carried out to determine the carbohydrate content in genjer plants, positive results were obtained. Testing of protein content in genjer plants obtained negative results after several testing processes were carried out. Testing of fat on genjer plants obtained positive results after going through several testing processes. Likewise with crude fiber and water content testing, both tests were positive after the testing process was carried out. From several studies and various testing processes that have been carried out, the genjer plant (limnocharis flava) is a plant that has many benefits and good fiber content for the body. This certainly shows that the genjer plant is quite good if consumed and used as an alternative in overcoming constipation in pregnant women.

Keywords: anemia, genjer (limnocharis flava), pregnant women, pregnancy, constipation.

Introduction

Anemia is one of the biggest problems experienced by pregnant women. Anemia that occurs during pregnancy not only affects the mother but also has an impact on the fetus. Pregnant women who experience severe anemia are at risk of bleeding during delivery and even death. While the baby is at risk of being born with low weight and premature. The incidence of anemia in Indonesia in 2018 reached 48.9%. As for the efforts made by the government to reduce the rate of anemia in pregnant women, namely by giving Fe tablets during pregnancy. But the impact of giving Fe tablets given by midwives or doctors will usually cause constipation or black stool (stool) color and hardened feces during pregnancy (Riskesdas, 2018). Apart from constipation as a result of consuming Fe tablets, it can also

be caused by the influence of physiological changes from pregnancy, namely drastic hormonal changes or an increase in the hormone progesterone during pregnancy which will cause the muscles to relax to provide a place for the growing fetus. Muscle relaxation also affects the intestinal muscles thereby reducing intestinal motility which ultimately causes constipation. In addition, during pregnancy the body retains fluids, the absorption of fluid in the intestine increases so that the contents of the intestine tend to be dry and hard which facilitates constipation.

The greater the pregnancy, the mother usually tends to reduce fluid intake. The composition of foods eaten in the form of milk, meat and fish that do not have sufficient fiber content will increase the risk of constipation. Likewise, the administration of iron and calcium supplements during pregnancy is a risk factor for constipation.

The growing uterus along with the development of the fetus in pregnant women will put pressure on the large intestine which results in obstructed stool evacuation. The bigger the pregnancy, the greater the pressure on the large intestine, making it easier for constipation to occur (Ojieh, 2012). Therefore, during pregnancy, the problem that is often experienced by pregnant women is constipation. One of the failure factors of the government program regarding the administration of Fe tablets to pregnant women is the frequent occurrence of constipation.

The alternative that must be considered by health workers is how to reduce constipation during pregnancy so that the mother's comfort in carrying out the pregnancy process can be fulfilled. Given that the city of Banjarmasin, South Kalimantan is an area that has a lot of swamps and part of the wetlands provide a variety of typical swamp plants that have been used for generations since ancient times as vegetables that can be categorized as local vegetables. In general, people take directly from nature for their own consumption or trade in the Martapura market, South Kalimantan (Susanti, 2015).

Genjer (Limnocharis flava) one of the plants that has the potential to be developed as a substitute for drugs, genjer has been known to have a fairly complete nutritional content. Genjer (Limnocharis flava) has a very good content. Genjer is rich in protein, fat, carbohydrates, crude fiber, water content and ash content (Rachmawati, 2010).

Genjer (Limnocharis flava) is also a food or vegetable that is often consumed by people in Banjarmasin as an alternative choice for fiber fulfillment in this place. So that researchers are interested in researching how to actually process this genjer into an extract which is used as an alternative to prevent constipation during pregnancy. Considering that pregnant women must continue to take Fe tablets and also the impact of Fe is constipation, so to reduce the failure of Fe, constipation must be handled properly.

Materials and Methods

1. Identification of Chemical Compounds

The tools and materials used in this identification process are: test tube, pasteur pipette, polythene spatula, evaporating cup, stirring rod, beaker glass, water bath, drip plate measuring cup. 95% ethanol, distilled water, magnesium powder, 5M HCI, FeC13, 10% gelatin solution, acetic acid, sulfuric acid and methanol (Sirait M, 2007).

a. Tannin Test

How it works: First prepare the extract, add 5 to 10 drops of 3% chloride solution, so that a bluish green or black color is produced.

b. Saponin Test

How it works: First add 0.5 g of the extract to be tested into a test tube, add 10 ml of hot water, then cooled, then shake for 10 seconds, after that check the test results if there is foam that lasts for 10 minutes it indicates the characteristics -characteristic of saponins, the height of which is at least 1 cm or more, then add a drop of hydrochloric acid solution, and make sure the foam does not disappear.

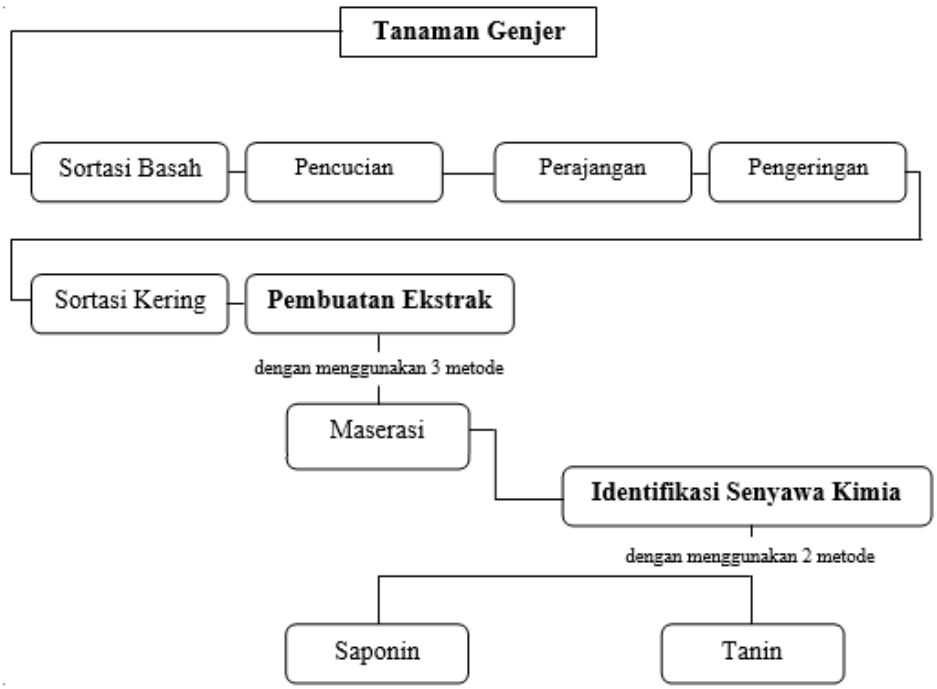

Figure 1: Simplicia, Extraction & Identification of Chemical Compounds.

Description: Genjer plants are processed from the first simplicia making process, namely the collection of raw materials, after that a wet sorting is carried out which aims to separate foreign organic substances attached to the raw materials, namely soil, sand and others that interfere with the next process.

After the wet sorting process, washing is carried out to make it cleaner, then a chopping process is carried out so that the material to be dried can dry evenly, then the drying process is carried out under direct sunlight, then dry sorting is carried out which aims to separate organic substances during the drying process. Then the next step is making the extract using the maceration method where the simplicia is soaked in ethanol for 24 hours with occasional stirring and then the filtrate is evaporated to obtain a thick extract.

Furthermore, to identify the content of chemical compounds using 2 methods, the first is the Saponin Test which aims to determine the anti-bacterial content in genjer and the Tannin Test which aims to determine the anti-microbial in genjer.

2. Identification of Genjer Content

a. Carbohydrate Test, Murray RK (2009)

The tools and materials used to test the carbohydrate content are: Breeder tube, test tube rack, Spirit lamp, dropper pipette, test tube clamp, Genjer plant (Limnocharis Flava), Carbohydrate test solution, Molisch's solution, Benedict's solution, Barfoed's solution, Solution Seliwanoff, Concentrated Sulfuric Acid, Lodin and H2O.

Molisch test : The working steps: First prepare the tools and materials, Put 2 ml of the sample into the culture tube, Add 2 drops of Molisch solution, homogeny, position the test tube or breeder on an incline and add concentrated sulfuric acid slowly through the tube wall until two solutions are formed, then see if there is a color change, if positive it will turn purple.

Iodine Test : The working steps: First prepare the tools and materials, add 1 ml of the sample into the breeding tube, then add 2 drops of iodine solution, heat the solution with direct fire, then cool it and see if there is a color change if positive it will turn into a dark blue color, burgundy or brownish.

Benedict's Test : The working steps: First prepare the tools and materials, Put 5 ml of Benedict's solution into the culture tube, add 8 drops of the sample, then heat it with direct fire for 2 minutes, after that cool the solution, and see if there is a color change, if positive it will changes to a turquoise, yellow, or red color depending on the production of sugar content.

Barfoed's Test : The working steps: First prepare the tools and materials, add 2 ml of the sample into the breeding tube, then put 2 ml of barfoed solution into the sample to be tested, heat the sample in boiling water for up to 3 minutes, then cool it under running water, observe the changes color that occurs and if positive it will change to brick red color.

Seliwanoff test : The working steps: First prepare the tools and materials, Put 3 ml of Seliwanoff's reagent into the reaction tube, Add 1 ml of the sample, heat it with spirit fire for 30 seconds, then cool it, if there is a color change, if it is positive it will turn red.

b. Protein Test/Biuret Test, Murray RK (2009)

In the protein/biuret testing process, tools and materials were used, such as: Breeder tube, Raxi tube rack, Dropper pipette, filter paper, Genjer Plant (Limnocharis Flava), 0.1% CuSO4 solution and 10% NaOH.

The working steps: First prepare the tools and materials, add 2 ml of the sample into the culture tube, then add 2 ml of sodium hydroxide, then add 2 drops of CuSO4 solution, if the color changes to purple then the result is positive.

c. Fat Test, Murray RK (2009)

In the fat testing process, tools and materials are used, such as: 1 pipette, filter paper/oil paper, Genjer Plant (Limnocharis Flava) and water.

The working steps: First prepare the tools and materials, Take a pipette, suck the sample and drop it onto filter paper / oil paper, Observe the changes that occur and if positive then it turns transparent on the paper on which the sample is dripped.

d. Coarse Fiber Test

Tools and materials used: Electric balance, Spatula, Desiccator, Suction ball, Hot plate, 1000 ml beaker, Glass rod, Oven, 10 ml measuring pipette, Coarse balance, Gas stove, Spray bottle, Water bath, Clamps, Standard, 250 ml beaker, Erlenmeyer, Stand-up cooler, Buchner funnel, Filter paper, Cup. Genjer Plant (Limnocharis Flava), Aquades, 1.25% sulfuric acid solution, 3.25% sodium hydroxide and 96% ethanol.

The working steps: First prepare the tools and materials, weigh 2-4 g of the sample, remove the fat in the sample by means of Soxlet extraction or stir, pour the sample into an organic solvent, the sample is

dried and put into a 500 ml Erlenmeyer, Add 50 ml 1.25% sulfuric acid solution and boiled for 30 minutes using an upright cooler, then added 50 ml of 3.25% sodium hydroxide and boiled again for 30

minutes, the solution was filtered in a hot state using a Buchner funnel containing odorless filter paper that had been filtered. dried and the weight is known, Washing the sediment contained on the filter paper successively with a solution of hot 1.25% sulfuric acid, hot water, and 96% ethanol, Finally the filter paper is removed and its contents are inserted into a cup with a certain weight and the drying process is carried out with a temperature of 105oC in an oven, then cooled, and calculate the crude fiber content of the sample.

First, weigh 2-4 grams of the sample, remove the fat contained by stirring the sample, the sample is poured in an organic solvent, dry the sample and enter it into a 500 ml Erlenmeyer, add 50 ml of 1.25% sulfuric acid solution, and the heating process is carried out. for 30 minutes using an upright cooler, adding 50 ml of 3.25% sodium hydroxide and boiling again for 30 minutes, then the solution was filtered in a hot state using a Buchner funnel containing ashless filter paper that had been dried and the weight was known. the filter paper is washed successively with a hot 1.25% sulfuric acid solution, hot water, and 96% ethanol, and finally the filter paper is removed along with its contents, and put into a cup, then dried at a temperature of 105oC using an oven and put to a boil. and weighed to a constant weight.

e. Moisture Test

In testing the moisture content used tools and materials such as: Analytical Balance, Oven, Cup, Desicator, Furnace, Knife, Pencil and Genjer Plant (limnocharis flava).

The working step: First, the cup is heated in a kiln with a temperature of up to 750o C and cooled in a desiccator for ± 10 minutes, the empty cup is weighed, then the sample is put into the cup and weighed to ensure the weight is ± 5gr and heated in the oven for ± 3 hours with temperature of 105o C, then cooled in a desiccator for 10 minutes, after that the cup containing the sample was weighed again and reheated in the oven for 1 hour, repeating the process 6-8 times until the weight was constant (± 0.005 gr).

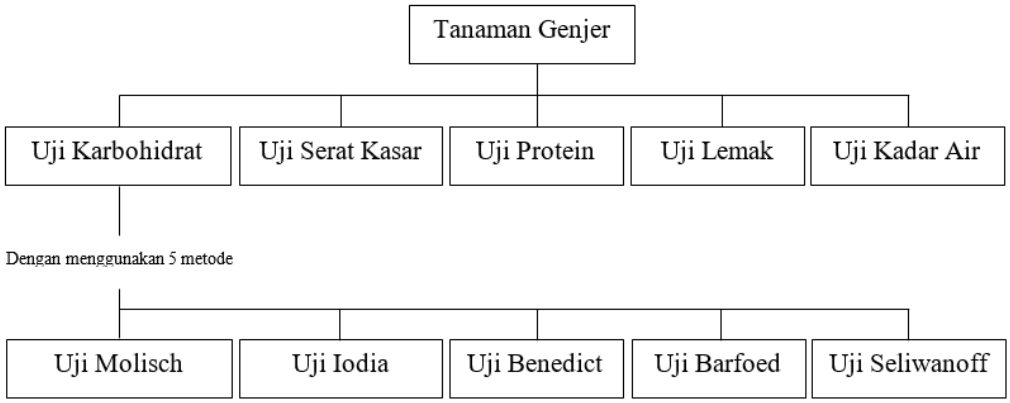

Figure 2 : Content Test on Genjer

Note: to test the content of genjer, first the genjer plant is cut into pieces and then in a blender, then heated after that the Molisch test is carried out by the process of inserting the sample into a test tube and adding Molisch reagent then heating it with direct fire then cool it, observe until there is a color change , if positive it will turn purple.

The iodine test is the process of entering the sample into a test tube and adding iodine reagent then heating it with direct fire and then cooling it, observing until a color change occurs, if it is positive it will turn into a dark blue color. Benedict's test is the process of inserting a sample into a test tube and adding Benedict's reagent then heating it with direct fire then cool it, observing until a color change occurs, if it is positive it will turn blue-green, or yellowish red depending on the sugar content.

The barfoed test is the process of inserting the sample into a test tube and adding barfoed's reagent then heating it with direct fire then cool it, observe until there is a color change, if positive it will turn brick red. The Seliwanoff test is the process of inserting the sample into a test tube and adding the Seliwanoff reagent then heating it with direct fire and then cooling it, observing until a color change occurs, if it is positive it will turn pink.

After the carbohydrate test has been carried out, the next step is to do a protein test, namely by inserting the sample into the culture tube, then adding the biuret solution and observing the color change that will occur, if it is positive it will turn purple.

Furthermore, the fat test is carried out, namely by dripping the sample onto filter paper or oil, if it is positive it will look transparent. Then test the crude fiber by pouring the sample into the solvent, then dry using an Erlenmeyer, then enter the H2SO4 solution and boil for 30 minutes then cool, then add sodium hydroxide and boil for 30 minutes, then filter using a funnel containing filter paper, then if there is any the precipitate on the filter paper is washed with a solution of sulfuric acid, hot water and ethanol,

finally the filter paper is removed and its contents into the prepared cup, then cooled and weighed to a constant weight.

The last test is the water content test. First, heat the cup in the oven and then cool it using a desiccator for ± 10 minutes, then put the material into the cup and heat it in the oven for 3 hours and cool it down, then weigh the final result so that the water content in the sample is known.

Result and Discussion

In the research, genjer plants were obtained and purchased at Terminal Market, Jl. Banjarmasin Scouts. The genjer plant has characteristics such as: its leaves are shiny green because it is coated with wax on its surface, there are fine pores on the stem because it is an aquatic plant, genjer is a plant that grows clayey in swampy areas or river banks. Genjer is also easily found in rice fields that are inundated with water both after harvest and between young rice plants (Fitmawati, 2017).

1. Standardization of Genjer Plant Extract

In addition to Simplicia and solvents that have been described previously, the results of the calculation of the thick extract can be seen in table 1.

Table 1: Thick Extract Calculation Results

No	Extract Making	Results
1	Fresh raw materials	785
2	Simplicity	385,33
3	Solvent (96% Ethanol)	5,83
4	Liquid extract	5,82
5	Thick extract	16,20

Furthermore, specific parameter tests were carried out on the genjer extract. Specific parameters are chemical content in the qualitative aspect of the levels of chemical compounds that are directly responsible for certain pharmacological activities. The results of standard testing of specific parameters can be seen in table 2.

Table 2: Specific Parameter Testing

	Specific
Extract Smell	Like the smell of the sap of the genjer plant
Extract Color	Deep green
Thickness	Very thick
Extract Flavor	Bit bitter

In this study, genjer extract was standardized with specific parameters including organoleptic (smell, color, shape and taste). The standardization method used is visually specific parameters in the form of organoleptic determination of the extract which is intended to describe the ethanol extract of the genjer plant that has been obtained in the study. Genjer plant extract can be described as a thick extract because the solvent evaporates all during evaporation, has a dark green color because the basic color of the genjer plant is green, and has a pigment called chlorophyll which causes the color of the extract to also be green, has a distinctive odor from genjer plants like sap when we take the genjer plant and the thick extract on the genjer plant also has a slightly bitter taste. The bitter taste of the extract is typical of the genjer plant.

2. Phytochemical Screening

Phytochemical Screening Test aims to determine whether there is a secondary metabolite content in genjer extract by testing for saponins and testing for tannins. The test results can be seen in table 3.

Table 3: Phytochemical Screening Test Results

Metabolit Sekunder	Hasil (+/-)	Keterangan
Saponin	-	Busa setinggi 1 cm setelah ditambahkan 1 tetes HCI2N buih hilang
Tanin	+	Biru tua atau hitam kehijauan

The results of the phytochemical screening test that have been carried out, to determine the content of secondary metabolites contained in the genjer plant extract, were carried out by 2 methods, namely the saponin test and the tannin test. Saponin test is a test carried out to determine the presence or absence of saponin compounds contained in genjer plants. Saponins are chemical compounds found in various plants. This compound is an amphipathic glycoside that can produce foam when shaken vigorously in solution, the foam is stable and not easily lost. In the test to determine the saponin compound, after the

extract was mixed with the solution, then shaken, the results were 1 cm high foam, after adding 1 drop of HCI2N the foam then disappeared which indicated a negative result on the saponin compound test.

The tannin test is a test carried out to determine the presence or absence of tannin compounds in the genjer plant extract. Tannins are polyphenolic compounds found in plants, have a bitter and chelating taste, which react with proteins and other organic compounds such as amino acids and alkaloids. In the genjer extract test to determine the content of tannin compounds, after the extract was mixed with a chloride solution, then the solution changed color to dark blue or greenish black which indicated a positive result on the tannin compound test.

What is used in researching the content of this genjer plant is using a qualitative test. After analyzing the nutritional content contained in the genjer plant, the results were obtained in the first test to determine the carbohydrate content using 5 test methods, namely the Molisch test, iodine test, Benedict's test, Barfoed's test and Seliwanoff's test. From the five tests, the results obtained (+) carbohydrates in genjer plants. The second test was carried out to determine the protein content present, and it turned out that the results obtained were (-). The third test was carried out on the fat content of the genjer plant and the results were (+) on the fat test. The fourth is to test the crude fiber content in the genjer plant and get a (+) result which indicates that there is crude fiber content in it. Finally, the water content test was carried out on the genjer plant and the results were (+) which indicated that the genjer plant had water content.

After conducting various kinds of tests in this study, it was found that the content contained in the genjer plant is good enough for public consumption, especially for pregnant women because the content in the genjer plant has fiber that can be recommended to pregnant women to be used as an alternative in overcoming constipation during pregnancy. Because genjer plants are very easy to find in the South Kalimantan region, especially the Banjarmasin city area and its surroundings. Genjer plants are also traded in the market at relatively cheap prices and genjer plants can also be taken directly from nature because genjer plants can be found in swamps, rice fields and vacant land that is flooded with water.

This study used fresh raw materials of 785 grams after drying into simplicia to get 385.33 grams, the results of raw materials into simplicia experienced a weight loss of 49.08%. Weight loss is caused by the water content in genjer plants that has disappeared during the drying process or simplicia (Luliana, 2016).

From the extraction process using the maceration method, the results obtained in the process of making a thick extract, namely the results of simplicia as much as 385.33 g, ethanol 96% as much as 5.83 l, liquid extract as much as 5.82 l, thick extract 16.20 g and randemen extract as much as 2.37% (w/w). The maceration method was chosen because it is a fairly easy and simple extraction method, because it

is carried out only in a cold and easy way and does not require heating so that there is little chance of damage to the test material. Working with the maceration method which is quite long and at rest allows many compounds to be extracted (Istiqomah, 2013; Susanty, 2016). The solvent used can penetrate the cell wall so that it enters the cell cavity which contains the active substance (Angelina, 2015). Extraction was carried out using 96% ethanol as solvent because ethanol can dissolve many compounds present in simplicia well, and evaporate easily (Soes et al, 2018). From several studies conducted by (Aida, 2016), (Febrianto, 2016) and (Sukmawati, 2015) also used 96% ethanol as solvent.

Simplicia extraction using 5.83 L of solvent obtained a thick extract of 16.20 g, because the solvent completely evaporated during the thickening process of the extract using an evaporator and only the juice of the genjer plant remained. Secondary metabolites are compounds that exist in plants and are synthesized by a biota not to affect the basic needs of plants, but to show their presence in their environment such as defending themselves from pests and diseases (Aida, 2015). The results of the viscous extraction can be seen in the image below.

Figure 3: Genjer Thick Extract.

The standardization method used is visually specific parameters in the form of organoleptic determination of the extract which is intended to describe the ethanolic extract of the genjer plant that has been obtained in the study. The genjer plant extract can be described as a thick extract because the solvent evaporates all during evaporation and leaves only the juice from the genjer plant, has a dark green color because the basic color of the genjer plant is green which causes the color of the extract to also be green, has a very pungent odor typical of the genjer plant. and has a slightly bitter taste.

The method in this study is to use a qualitative test, namely this research that prioritizes the presence or absence of the results obtained in the research process.

In research conducted on genjer plants, several results were found, namely: 1) Carbohydrate content was tested using several methods: a) Molisch test, namely by preparing tools and materials after which

the genjer plant was blended until smooth using ethanol liquid, then put into a tube. breeder, then add 2 drops of molisch solution, then tilt the tube and carefully add concentrated sulfuric acid solution through the tube wall of the breeder, after that it was found that the genjer plant with the molisch test method was positive because the solution turned purple. b) iodine test, namely by preparing tools and materials after which the genjer plant is blended until smooth using ethanol liquid, then put into a test tube, then add 2 drops of iodine solution, then heat the solution with direct fire until it boils, then cooled, after that it is obtained the results that genjer plants with the iodine test method were positive because the solution turned a dark blue color. c) Benedict's test, namely by preparing tools and materials after which the genjer plant is blended until smooth using ethanol liquid, then adding 5 ml of Benedict's solution into the breeder tube and 8 drops of mashed genjer extract, then heated with direct fire until boiling for 2 minutes , then cooled, after that it was found that the genjer plant with the Benedict's test method was positive because the solution turned a reddish blue color. d) barfoed test, namely by preparing tools and materials after which the genjer plant is blended until smooth using ethanol liquid, then adding 2 ml of barfoed reagent into a test tube and 2 ml of mashed genjer plant, then heated with direct fire for 3 minutes until it boils , then cooled, and the results showed that the genjer plant with the barfoed test method was positive because the solution turned brick red. e) the seliwanoff test, namely by preparing tools and materials after which the genjer plant was blended until smooth using ethanol liquid, then added 3 ml of the seliwanoff reagent into a test tube and 1 ml of the mashed genjer plant, then heated with direct fire until it boils for 30 seconds , then cooled, after that it was found that the genjer plant with the Seliwanoff test method was positive because the solution turned red. 2) The protein content tested is by preparing tools and materials after which the genjer plant is blended until smooth using ethanol liquid, then adding 2 ml of the mashed genjer plant, 2 ml of NaOH, 2 drops of CuSO4 solution into a test tube, after that the results show that Negative protein test because it does not turn purple and remains green as before. 3) The fat content tested is by preparing tools and materials after which the genjer plant is blended until smooth using ethanol liquid, then put it into a glass beaker, then placed on Hot Plates with a temperature of 204 oC, after that the liquid is sucked up using a pipette and then dripped onto paper oil and got a positive result because it turned transparent on the paper dripped with genjer plant. 4) The crude fiber content tested is by preparing tools and materials, weighing 2-4 g of genjer plant, removing the fat by stirring, the sample is poured into an organic solvent then the sample is dried and put into a 500 ml Erlenmeyer by adding 50 ml of sulfuric acid solution. as much as 1.25% and heated for 30 minutes, allowed to boil using a Hot Plate, then added 50 ml of 3.25% NaOH and boiled again for 30 minutes, filtering the hot solution using a Buchner funnel containing odorless filter paper. It washes the sediment contained on the filter paper successively with hot water and ethanol, finally the filter paper is removed along with its contents and put into a cup whose weight is known and dried at a temperature of 105 oC, then cooled and weighed so that positive results are obtained from the content test. crude fiber. 5) The content of water content, namely preparing tools and materials, then the

cup is heated in a furnace with a temperature of 750 oC, after that the material is cooled in a desiccator for ± 10 minutes, then the material is put into the cup after it is weighed and heated in an oven at a temperature of 105 oC for 3 hours, then cool, after that the cup containing the material is weighed again so that positive results are obtained on testing the water content of genjer plants.

Analysis of the composition of the chemical content in the genjer plant was carried out through content testing in fresh conditions at different times. The part of the genjer plant used in this study consisted of leaves and stems only. The tests carried out consisted of tests for carbohydrates, protein, fat, crude fiber and water content. The chemical composition of the genjer plant can be seen in the table below.

Proximate Analysis	Result *	Result **
Carbohydrate	Positive	Positive
Protein	Negative	Positive
Fat	Positive	Positive
Coarse Fiber	Positive	Positive
Water content	Positive	Positive

(*) Research result.
(**) Research result from Saupi (2009)

The results of the chemical composition test as shown in the table above show a slight difference between the results of the research that has been done and the results of the research conducted by Saupi (2009). The composition of the content of the genjer plant can be influenced by several factors such as soil fertility, genetic characteristics of the plant, and the habitat or place where the plant grows (Miller, 1996). So that research results can be different between research that has been done with the results of other studies.

The results of other research conducted by Winangsih (2013) are that there are differences in the results of simplicia with different drying methods or methods. From a sample of 500gr of fresh simplicia, the simplicia that produced the highest dry weight was by the wind dry method (aerated) which was 156.23 grams, and the simplicia that produced the lowest dry weight or the least was by the oven method and produced 128, 00 gr. This is comparable to the moisture content produced by the wind-dry method, which is 8.96±0.73%, while the moisture content produced by the oven-drying method is 5.28±0.17%. This shows that the temperature at various drying methods greatly affects the water content produced and the length of drying time (Winangsih, 2013).

Conclusion

In this study, the identification of chemical compounds and identification of the content in the genjer plant was carried out. In the identification of chemical compounds, two tests were carried out, namely the saponin test and the tannin test. The saponin test is a test that aims to determine the anti-bacterial properties of genjer plants. Tannin test is a test that aims to determine the anti-microbial in genjer plants.

Then the identification of the content in the genjer plant was also carried out by carrying out several tests. Testing the carbohydrate content in genjer plants is by 5 tests, namely the Molisch, Iodine, Benedict, Barfoed and Seliwanoff tests. Of the five tests carried out to determine the carbohydrate content of the genjer plant, positive results were obtained in all tests. Testing of protein content in genjer plants obtained negative results after several testing processes were carried out. Testing of fat on genjer plants obtained positive results after going through several testing processes. Likewise with crude fiber and water content testing, both tests were positive after the testing process was carried out.

From several studies and tests that have been carried out, the genjer plant (limnocharis flava) has many benefits and good fiber content to be used as an alternative in overcoming constipation during pregnancy. This plant is also easy to obtain because it is often found in the market and grows in swamps. So that the genjer plant is very suitable to be an alternative in meeting the needs of fiber for the body.

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