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Analysis of Kandis Acid as a Study of Science and Socio-Cultural Benefits in Society

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Abstract

The main ingredient of kandis acid is the asam padeh part, which is a typical Indonesian food that has a sour and spicy taste and is then processed into instant spices. This study aims to analysis of kandis acid as a study of science and socio-cultural benefits in society. This study used descriptive analysis and the disc diffusion method using several concentrations of ethanol extract of kandis acid leaves, namely 15%, 25%, and 35%, positive control 1% chloramphenicol (w/v), and 1% (v/v) DMSO negative control. The diameter of the inhibition zone produced in the test of ethanol extract from kandis acid leaves against Staphylococcus aureus bacteria, respectively: 10.73 mm; 11.61 mm; 12.98 mm and 25.5 mm for positive control, while for Escherichia coli bacteria, namely: 6.11 mm; 8.16mm; 10.85mm; and positive control 22.75 mm. The results of statistical tests showed that there was a significant difference, meaning that the concentration had an effect on the inhibition zone formed. In conclusion, the ethanolic extract of kandis acid leaves has antibacterial activity against the growth of Staphylococcus aureus and Escherichia coli bacteria. The instant asam padeh seasoning is made from a mixture of various spices and also kandis acid which has a yellowish-orange color.

Keywords
garcinia xanthochymus; disc diffusion; staphylococcus aureus; escherichia coli

I. Introduction

The main ingredient of kandis acid is the asam padeh part, which is a typical Indonesian food that has a sour and spicy taste and is then processed into instant spices. Kandis acid is one of the plants of the Garcinia genus. Garcinia is a genus of the Guttiferae (mangosteen) family which is rich in phenolic compounds of flavonoid, xanthone, and benzophenone types. This group of compounds is known to have diverse biological activities such as antioxidants, antimicrobials, cytotoxic, and antimalarial (Darwati et al., 2019).

The cause of infection is caused by a number of microorganisms such as pathogenic bacteria commonly known as disease germs (Pratiwi, 2008). The results of a study by Syamsudin et al., (2007) entitled Screening of Some Extracts from Garcinia parvifolia Miq. (Guttiferae) for Antiplasmodial, Antioxidant, Cytotoxic and Antibacterial Activities, against Staphylococcus aureus and Escherichia coli bacteria were found on the leaves using methanol solvent with extract concentrations of 2% and 20% using staphylococcus aureus and escherichia coli test bacteria, the diameter of the inhibition zone obtained was 7 mm and 19 mm in staphylococcus aureus bacteria, while in escherichia coli the diameter of the inhibition zone did not form (Syamsudin et al., 2007). This study aims to analysis of kandis acid as a study of science and socio-cultural benefits in society.

II. Research Methods

2.1 Place and Time of Research

Place and time of research is a series of general descriptions that explain the location of data collection techniques in a research (Pandiangan, 2015). This section itself is created as an explanation that the research was actually carried out (Pandiangan, 2018).

This research was conducted at the Microbiology Laboratory of the Helvetia Health Institute in Medan and was carried out in July-September 2021.

2.2 Tool

The tools used in this research are digital scale, beaker glass, wire ose, erlenmeyer, bunsen lamp, tripod stand, petridist dish, autoclave, oven, matches, dropper, knife, tweezers, spatula, stirring rod, rotary evaporator, test tube, test tube rack, caliper, paper disc.

2.3 Ingredient

The materials used in this study were ethanol extract of kandis acid leaves, 70% ethanol, EMBA, MSA, MHA, DMSO, 0.9% NaCl, 1% H2SO4, 1% BaCl2, HCL, chloroform, Mayer reagent, Bouchardat reagent, reagent dragendorf, Mg powder, FeCl3, Na2SO4, molish reagent, n-hexane, chloramphenicol antibiotic, aquadest, Staphylococcus aureus and Escherichia coli bacteria.

2.4 Sample

The sample is a small part of the selected items and a larger group and researched to determine from the group (Pandiangan et al., 2018). Samples of these items help the statistician to determine precisely the nature of the group. Sampling was done by purposive sampling. Purposive sampling is one type of sampling technique commonly used in scientific research (Pandiangan et al., 2021). Purposive sampling is a sampling technique by determining certain criteria. The sample used in this study was kandis acid leaf (Garcinia xanthochymus) taken from Prabumulih Palembang.

2.5 Research Procedure

This study used descriptive analysis and the disc diffusion method using several concentrations of ethanol extract of kandis acid leaves, namely 15%, 25%, and 35%, positive control 1% chloramphenicol (w/v), and 1% (v/v) DMSO negative control. The diameter of the inhibition zone produced in the test of ethanol extract from kandis acid leaves against Staphylococcus aureus bacteria, respectively: 10.73 mm; 11.61 mm; 12.98 mm and 25.5 mm for positive control, while for Escherichia coli bacteria, namely: 6.11 mm; 8.16mm; 10.85mm; and positive control 22.75 mm.

2.6 Simplicity Making

Samples of kandis acid leaves (Garcinia xanthochymus) were collected as much as 7 kg, then cleaned of foreign materials or impurities that were carried away at the time of harvest, washed with running water and chopped using a knife with a uniform size, then dried by aerating, after drying, separated from foreign objects and from simplicia that are not suitable for use and puree using a blender and filter, so that a dry simplicia powder is obtained and put into a container.

2.7 Making Kandis Acid Leaf Extract

Dry powder of kandis acid leaf (Garcinia xanthochymus) was extracted using maceration method with 70% ethanol as solvent. Maceration was carried out for 7 days, 500 g of simplicia was put into a glass jar then soaked in 3,750 ml 70% ethanol covered with aluminum foil for 5 days (stirring occasionally) then filtered using competitive paper and obtained filtrate 1 and pulp1. Soak the dregs 1 using ethanol 70% as much as 1,250 ml for 2 days (stirring occasionally) then filtered using filter paper and obtained filtrate 2 and dregs 2. Next, unite filtrate 1 and 2 and concentrate in a rotary evaporator until a thick extract is obtained (Anomin, 1979).

2.8 Characteristics of Simplicia

a. Determination of Water Level

Accurately weigh approximately 10 g of the sample, put it in a container that has been tared. Dry at 105℃ for 5 hours, and weigh. Continue drying and weighing at 1 hour intervals until the difference between two consecutive weighings is not more than 0.25% (Anomin, 2017).

b. Determination of Total Ash Content

Accurately weigh 2 to 3 g of the mashed test material and put it in a silicate crucible that has been incandescent and tara, incandescent slowly until the charcoal runs out, incandescence is carried out at 600°C for 3 hours then cool and weigh. The total ash content is calculated against the weight of the test material, expressed in % w/w (Anomin, 2017).

c. Determination of Acid Insoluble Ash Content

Boil the ash obtained in the Determination of Total Ash Content with 25 mL of dilute hydrochloric acid LP for 5 minutes. Collect the acid-insoluble part, filter through ash-free filter paper, wash with hot water, ignite in a crucible to constant weight. Ash content that is not soluble in acid is calculated against the weight of the test material, expressed in % w/w (Anomin, 2017).

d. Determination of Ethanol Soluble Extract Content

Accurately weigh approximately 5 g of powder that has been dried in the air. Put it in a corked flask, add 100 mL of ethanol P, shake many times for the first 6 hours, leave for 18 hours. Filter quickly to avoid evaporation of ethanol, evaporate 20.0 mL of the filtrate to dryness in a shallow, flat-bottomed dish that has been heated to 105° and thawed, heat the remainder at 105° to constant weight. Calculate the content in % ethanol soluble extract (Anomin, 2017).

e. Determination of Water Soluble Juice Content

Accurately weigh approximately 5 g of powder that has been dried in the air. Put in a corked flask, add 100 ml of chloroform saturated water, shake many times for the first 6 hours, leave for 18 hours. Filter, vaporize 20.0 mL of the filtrate to dryness in a shallow flat-bottomed dish that has been heated to 105 and tara, heat the remainder at 105° to constant weight. Calculate the content in % water-soluble juice (Anomin, 2017).

2.9 Phytochemical Screening

a. Alkaloids Check

The sample was weighed as much as 0.5 g, then added 1 ml of 2 N hydrochloric acid and 9 ml of distilled water, heated on a water bath for 2 minutes, cooled and then filtered. The filtrate was used for the following experiments:

1. Take 3 drops of the filtrate, then add 2 drops of Mayer's reagent to produce a white/yellow precipitate.
2. Take 3 drops of the filtrate, then add 2 drops of Bouchardat reagent to produce a dark brown precipitate.
3. Take 3 drops of the filtrate, then add 2 drops of Dragendorph's reagent to produce a brick red precipitate.

If there is a white precipitate with at least 2 or 3 of the above tests, then the simplicia is declared positive for containing alkaloids (Marjoni, 2016).

2.10 Flavonoid Examination

A total of 10 g of sample was added with 100 ml of hot water. The mixture was then boiled for about 5 minutes then filtered when hot. As much as 5 ml of the obtained filtrate, added 0.1 g of Mg powder, 1 ml of concentrated HCL and 2 ml of amyl alcohol, shaken and allowed to separate. Positive flavonoids if there is a red, yellow, orange color on the amyl alcohol layer (Marjoni, 2016).

2.11 Tannin Check

A total of 0.5 g of sample was extracted using 10 ml of distilled water. The extraction results were filtered then the filtrate obtained was diluted with distilled water until it was colorless. The result of this dilution is taken as much as 2 ml, then added with 1-2 drops of iron (III) chloride. A blue or blackish green color occurs indicating the presence of tannins (Marjoni, 2016).

2.12 Saponin Check

A total of 0.5 g of the sample was put into a test tube and added 10 ml of hot distilled water, cooled then shaken vigorously for 10 seconds, foam or foam is formed which for not less than 10 minutes as high as 1-10 cm, on the addition of 1 drop of solution 2 N hydrochloric acid, if the foam does not disappear, it indicates the presence of saponins (Marjoni, 2016).

2.13 Steroid/Triterpenoid Test

A total of 1 g of sample was macerated with 20 ml of n-hexane for 2 hours, then filtered. The filtrate is evaporated in an evaporating dish. In the remainder, 2 drops of anhydrous acid and 1 drop of concentrated sulfuric acid are added. A purple or red color appears then changes to blue green indicating the presence of triterpenoid steroids (Marjoni, 2016).

2.14 Equipment and Media Sterilization

The tools and all the media used were washed and then wrapped in paper. Sterilized by autoclaving at 121°C for 15 minutes for tools and materials that are not heat resistant. Meanwhile, glass utensils are put into the oven and then sterilized at a temperature of 160-170°C for 1-2 hours (7). Ose needles and tweezers were sterilized by dipping them in 70% alcohol and igniting using a Bunsen flame (Armaleni et al., 2016).

2.15 Making EMBA Media for Tilt

Weighed 0.375 g of EMBA (Oxoid) media, dissolved in 10 ml of distilled water using an erlemeyer. After that it was brought to a boil, poured into a sterile test tube and covered with aluminum foil. Sterilized using an autoclave for 15 minutes at 121°C. Then it was left at room temperature for ± 30 minutes until the media solidified at a slope of 30° (Dima et al., 2016).

2.16 Making MSA Media for Tilt

Weighed 1.08 g of MSA (Merck) media dissolved in 10 ml of distilled water using an erlemeyer. After that, bring to a boil, pour into sterile test tubes and cover with aluminum foil. Sterilize using an autoclave for 15 minutes at 121°C. Then it was left at room temperature for ± 30 minutes until the media solidified at a slope of 30° (Dima et al., 2016).

2.17 Making MHA Media for Antibacterial Activity Test

Weighed 6.08 g of MHA (Oxoid) media dissolved in 160 ml of distilled water using an erlemeyer. After that bring to a boil and cover with aluminum foil. Sterilize using an autoclave for 15 minutes at a temperature of 121°C (Dima et al., 2016).

2.18 Bacterial Rejuvenation

The test bacteria were taken with a sterile ossicle needle, then implanted on the EMBA agar medium for E.coli bacteria and MSA tilted agar for Staphylococcus aureus bacteria by scraping. It was then incubated in an incubator at 37°C for 24 hours. The same treatment was carried out on each type of test bacteria (Dima et al., 2016).

2.19 Preparation of Standard Turbidity Solution (Mc. Farland's Solution 0.5)

99.5 ml of 0.36 N H2SO4 solution was mixed with 0.5 ml of 1.175% BaCl2.2H2O solution in an erlenmeyer. Then shaken until a cloudy solution is formed (Dima et al., 2016).

2.20 Bacteria Suspension Manufacturing

The inoculated test bacteria were taken with sterile wire and then suspended into a tube containing 2 ml of 0.9% NaCl solution until the turbidity was the same as the standard turbidity of Mc. Farland. The same treatment was carried out on each type of test bacteria (Dima et al., 2016).

2.21 Kandis Acid Leaf Ethanol Extract Dilution

Preparation of stock solution of 50% kandis acid (Garcinia xanthochymus) leaf ethanol extract by weighing 1 gram of thick extract dissolved with DMSO ad 2 ml. For a concentration of 15%, 0.3 ml of the stock solution was taken and dissolved with DMSO ad 1 ml. For a concentration of 25%, 0.5 ml of the stock solution was taken and dissolved with 1 ml of DMSO ad. For a concentration of 35%, 0.7 ml of the stock solution was taken and dissolved with DMSO ad 1 ml.

2.22 Positive Control Creation

The positive control used was 1% chloramphenicol, made by weighing 1 gram of chloramphenicol powder and put it in a measured flask dissolved with distilled water until the volume was 100 ml (Anomin, 1979).

2.23 Negative Control Creation

The negative control used was 1% DMSO, made by inserting 1 ml of DMSO into a measured flask, then dissolved with distilled water until the volume was 100 ml (Anomin, 1979).

2.24 Bacteria Identification

The test bacteria were taken using ose and inoculated into EMBA selective media for E.coli bacteria and MSA selective media for Staphylococcus aureus bacteria. After that, they were incubated for 18-24 hours at 37°C. Then observe the color changes in the growing media and colonies (Sari et al., 2019).

2.25 Antibacterial Activity Test of Kandis Acid Leaf Ethanol Extract

The test bacteria were rejuvenated first, then a bacterial suspension was made. A total of 0.1 ml of the suspension was put into a sterile petri dish, after which 15 ml of sterile MHA media was poured and allowed to solidify. On the solid media, a paper disc with a diameter of 5 mm was placed which had been soaked for 15 minutes first in a solution of ethanol extract of kandis acid leaf extract with a concentration of 15%, 25% and 35%, positive control and negative control, incubated at 35 ±2°C for 18-24 hours. Furthermore, the diameter of the inhibition zone around the solution of the test material was measured using a caliper and was carried out three times (Mayasari and Berutu, 2007).

2.26 Data Analysis

Analysis of antibacterial activity data was carried out by measuring the diameter of the inhibition zone using a caliper at each concentration. The presence of bioactive components in plants is known to have antibacterial effects (Ramadhianto, 2019). Then a static analysis was performed using the one-way analysis of variance (ANOVA) and the Tukey test using the SPSS program (Octaviani et al., 2019). The weak antibacterial activity observed in this study can be improved by bio-guided fractionation of the ethyl acetate or methanol soluble fraction (Ngunde-te-Ngunde, 2019). ANOVA is a comparative test used to test the difference in the mean (mean) of data for more than two groups. For example, we want to know whether there is a difference in average IQ between junior high school students in grades I, II, and III (Tobing et al., 2018).

III. Discussion

3.1 Plant Determination

The results of the determination carried out at the Herbarium Medanense, Herbarium Laboratory of the Faculty of Mathematics and Natural Sciences (FMIPA) of the Universitas Sumatera Utara against the kandis acid plant is Garcinia xanthochymus.

3.2 Characteristics of Simplicia

The results of the examination of the simplicia characteristics of kandis acid leaves can be seen in Table 1 below:

Table 1. Results of Simplicia Characteristics

No.	Determination	Simplicity Level (%)
1	Determination of water level	8.479
2	Determination of total ash content	5.272
3	Determination of acid insoluble ash content	0.285
4	Determination of ethanol soluble extract content	22.59
5	Determination of water soluble juice content	18.73

3.3 Phytochemical Screening

The results of phytochemical screening of the ethanolic extract of kandis acid leaves can be seen in Table 2 below:

Table 2. Phytochemical Screening Results

No.	Inspection	Results
1	Alkaloids	+

2	Flavonoids	+
3	Saponins	+
4	Tannins	+
5	Steroids/Triterpenoids	+

Description:
+ = there are secondary metabolites
- = no secondary metabolites

3.4 Antibacterial Activity Testing

The results of the diameter of the inhibitory zone of the antibacterial activity test of the ethanolic extract of the leaves of kandis acid (Garcinia xanthochymus) can be seen in Table 3 below:

Table 3. Antibacterial Activity Test Results

Test Bacteria	Sample	Inhibitory Zone Diameter (mm)	Remark
Staphylococcu aureus	15%	10.73	Currently
	25%	11.61	Strong
	35%	12.98	Strong
	Control +	25.5	Very Strong
	Control -	0	Don't Hinder
Escherichia coli	15%	6.11	Currently
	25%	8.16	Currently
	35%	10.85	Currently
	Control +	22.75	Very Strong
	Control -	0	Don't Hinder

From the results of the examination of the characteristics of the simplicia that has been carried out, the water content of the simplicia leaves of kandis acid using the gravimetric method is 8.479% and meets the standards of the Indonesian Herbal Pharmacopoeia, which is not more than 10%. The water content test was carried out to determine the amount of water content in simplicia which could affect the quality of simplicia, where a high water content could facilitate the growth of fungal microbes which could reduce the biological activity of simplicia (Wijanarko et al., 2020).

The total ash content test of kandis acid leaf simplicia using a kiln was obtained, which was 5.272%. Determination of ash content was carried out to determine the content of inorganic compounds in simplicia such as Mg, Ca, Na, and K. While the test results for acid insoluble ash content using dilute hydrochloric acid solvent were 0.285%. The acid insoluble ash content test is used to determine the levels of inorganic compounds that are insoluble in acid (Mayasari and Laoli, 2018). The juice content test is carried out using 2 solvents, namely ethanol and water which aims to determine the amount of substances dissolved in ethanol and water. From the results of the study, the content of soluble ethanol extract was 22.59% greater than the content of water soluble which was 18.73% (Mayasari and Laoli, 2018).

Phytochemical screening was carried out to provide an overview of the class of compounds contained in the ethanolic extract of kandis acid leaves. The results of phytochemical screening showed that the 70% ethanolic extract of kandis acid leaves was positive for polar, semipolar, and non-polar compounds, such as alkaloids, flavonoids, saponins, tannins, and steroids/triterpenoids. Secondary metabolite compounds owned by

plants such as alkaloids, flavonoids, saponins, tannins, and steroids/triterpenoids have antibacterial activity (Nababan et al., 2020).

EMBA media is a selective medium for the growth of E.coli and MSA media is a selective medium for Staphylococcus aureus. The results of bacterial identification by biochemical tests using selective media showed that the bacteria were positive for E.Coli and Staphylococcus aureus. In EMBA media, which was originally purplish red, turned metallic green because EMBA media contained lactose, if in culture there were bacteria belonging to the Escherichia genus, the acid produced from lactose fermentation would produce green with a metallic luster (Sari et al., 2019). Meanwhile, in MSA media, which was originally red, will turn yellow, the yellow color arises due to mannitol fermentation by Staphylococcus aureus (Murwani, 2015).

3.5 Antibacterial Activity Testing

Antibacterial activity testing using disc diffusion method using disc paper. This method is used because it has several advantages, namely it is easy to do, does not require special equipment and is relatively inexpensive. The disc paper method was carried out by placing the disc paper that had been soaked in the test solution on solid media that had been inoculated with the test bacterial suspension and incubated for 18-24 hours in an incubator at a temperature of 35±2°C. The average diameter of the inhibition zone of the ethanolic extract of kandis acid leaves against Staphylococcus aureus was greater than that of Escherichia coli. In Staphylococcus aureus with concentrations of 15%, 25%, and 35% the diameter of the inhibition zones obtained were 10.73mm, 11.61mm, and 12.98mm with the inhibition zone categories for a concentration of 15%, namely moderate, 25% and 35% concentration. ie strong. Meanwhile, for Escherichia coli bacteria with concentrations of 15%, 25%, and 35% the diameter of the inhibition zones obtained were 6.11mm, 8.16mm, and 10.85mm with the inhibition zone category being moderate. The difference in the results of the inhibitory test was caused by the bacteria Staphylococcus aureus and Escherichia coli originating from different groups of bacteria, where S. aureus was gram positive and E. coli was gram negative. Gram-positive cell wall structure is simpler where 90% of the cell wall consists of a layer of peptidoglycan and the other layer is teichoic acid. Meanwhile, the gram-negative cell wall structure is multi-layered and the fat content is relatively higher (11-12%) so that gram-positive bacteria are easily damaged by antibacterial compounds from the ethanolic extract of kandis acid leaves. The results of testing the antibacterial activity of the ethanolic extract of kandis acid leaves are known that the higher the concentration used, the greater the inhibition zone formed. This is because the higher the concentration of the extract, the more antibacterial substances it contains (Lingga et al., 2016).

The positive control used in this test is chloramphenicol powder. Chloramphenicol is a broad-spectrum antibiotic that is able to inhibit the growth of gram-positive and negative bacteria and has a very strong inhibitory power. While the negative control used was DMSO. The use of DMSO as a negative control is because it will not interfere with the results of observations because it does not provide activity against bacterial growth (Octaviani et al., 2019).

The chemical compounds contained in the ethanolic extract of kandis acid leaves have different mechanisms in inhibiting bacterial growth, including: the mechanism of action of flavonoids giving a bacteriolytic effect, inhibiting protein synthesis, DNA, RNA synthesis and damaging cell membrane permeability. The mechanism of action of saponins as antibacterial can cause bacterial cell wall lysis and leakage of AKP (Alkaline Phosphate). An increase in saponin concentration causes proteins to dissolve, causing intercellular compounds to diffuse through the outer membrane and cell wall, so that the cytoplasm leaks out of the cell and causes cell death. Tannins can prevent the development of microorganisms

by precipitating microbial proteins and making nutritional proteins unavailable to bacteria. The mechanism of action of alkaloids is to interfere with the constituent components of peptidoglycan in the bacterial cell wall and as an accelerator in the topoisomerase enzyme in inhibiting bacterial cell DNA. The mechanism of action of triterpenoids has broad antimicrobial activity against bacteria, yeast and filamentous fungi. Triterpenoids are antimicrobial because they can damage yeast cell membranes or damage lipid membrane synthesis which results in membrane permeability resulting in leakage of cell components (Nababan et al., 2020).

3.6 Kandis Acid as Socio-Cultural Benefits in Society

Instant seasoning is a mixture of various kinds of herbs and spices that are processed and processed with a certain composition. Consumers are more interested in the use of instant spices to make dishes. This is because instant seasoning ingredients are more practical to use and save time in cooking, have a long shelf life, and the right amount of seasoning for cooking. Instant seasoning products consist of two types, namely the wet type and the dry type (powder). Making instant spices is also beneficial for people who travel far for a long time such as overseas. They will still be able to cook Indonesian specialties even though they are not in Indonesia, because spices in foreign countries are certainly difficult to find. If at any time they miss Indonesian specialties, then instant spices for Indonesian specialties are ready to be cooked. An example is tamarind.

Asam spicy (Indonesian) or asam padeh (Minangkabau language) is one of the traditional Minangkabau dishes and then spread in the Malay region (Riau, Riau Islands, Jambi, and the Malay Peninsula) and Sumatra which has a sour and spicy taste. This asam padeh dish uses various types of fish such as tuna, snapper, tuna, mackerel, gourami, and other types of fish which are then seasoned with kandis acid, chili, and other spices.

This dish is well known in Minangkabau and Malay art of cooking, so it is not clear where this dish originated. Minang spicy and sour dishes can be found in all Padang restaurants in Indonesia and Malaysia, and have even become a specialty of the Malay and Acehnese people. However, the mix of spices used differs according to each region. Asam spicy is a sauce in which there are spicy and sour spices complemented by various types of spices. In Aceh, spicy tamarind is combined with tuna fish which is called tamarind keueng. Meanwhile in Riau, sour and spicy has become part of the Malay cooking art, which is usually combined with catfish and snakehead fish. In the Riau Archipelago, sour and spicy is more often combined with snapper.

The instant asam padeh seasoning is made from a mixture of various spices and also kandis acid which has a yellowish-orange color. The instant asam padeh seasoning is made with the aim of making it easier for today's people who are increasingly busy to consume asam padeh. The advantage of this instant asam padeh seasoning is that it is easy to use and has a long shelf life.

Dense lifestyles such as work, school, and social relations have caused some people to change their consumption patterns and lifestyle. Busyness is the main reason someone chooses practical and ready-to-eat food. This change changes the needs of people who want everything in an instant form. The many types of spices used in making Indonesian specialties make some people lazy to cook, so people prefer to use instant spices on the grounds that it makes it easier for career women to cook. The use of instant spices can also help catering entrepreneurs or the culinary industry in making processed foods. Instant seasoning can also maintain the consistency of the taste of the processed food because the consistency of taste is very important in making a food.

IV. Conclusion

From the results of the research that has been done, it can be concluded that the ethanolic extract of kandis acid (Garcinia xanthochymus) leaves contains chemical compounds of alkaloids, flavonoids, tannins, saponins, and steroids/triterpenoids, and the ethanolic extract of kandis leaves (Garcinia xanthochymus) has antibacterial activity against the growth of Staphylococcus aureus and Staphylococcus aureus. Escherichia coli with the best concentration is 35%. The instant asam padeh seasoning is made from a mixture of various spices and also kandis acid which has a yellowish-orange color.

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