

The Effect Of Sugar And Jelly Concentration On The Quality Of Young Coconut Pudding (*Cocos Nucifera L.*)

Antonio C. Martins

Department of Food Processing Technology Faculty of Agriculture, Unpaz University,
Timor-Leste

Korespondensi penulis: casmer407@gmail.com

Abstract. Oil plants (*Cocos nucifera L.*) is a versatile plant or plants that have a steeper economic value of all parts of the coconut tree can be the benefits for human needs. False coconut oil is a processed product made from young coconut meat coconut pudding manufacture in modern done through the stages are quite complicated and costly, so that only done by large industries. affect factors on fermentation needs to be optimized to result in qualified young coconut pudding the purpose of this study was to determine influence concentration of sugar and agar-agar to quality coconut pudding in addition to knowing the most permanent treatment that can produce the highest quality coconut pudding the hypothesis of this study. Presumably the influence concentration of sugar and agar-agar to the quality of pudding coconut. And affect the level of consumer preferences. The method used is an experimental research by using a completely randomized design (RAL), which consists of two factors, namely: Concentrations of sugar and gelatin with 300 gram 400 gram 500 gram while the factors gelatin with composition 7 g, 14 g, 21 g. While the variable that is used to measure the level of preference is the color flavor aroma and texture. Variables were measured in this study is using composition test by testing the level of preference are: color, taste, aroma, and texture. Using a scoring scale test method (numbering) commonly in use No. 1-5 and panelists in use totaled 15 Orang representing consumers the results of composition test of the level of preference of color, flavor, aroma, and texture of pudding meat fruit coconut based assessment best treatment that is adjusted from public view representing 15 people panelists then be in concluded that treatment in consider best is in treatment (GPI Aa2).

Keywords: Sugar Agar - Agar And Meat Fruit Coconut Pudding Young.

INTRODUCTION

Coconut (*Cocos nucifera*) is a plantation commodity that is widely known by the world's population, including the people of Timor Leste who also cultivate it widely. Coconut plants have high economic value, that is, every part of the coconut plant can be used by humans, such as coconut stems can be used as raw materials for furniture, furniture, building materials and emergency bridges, while young leaves are used as wrappers for diamonds and roofs, the sticks are used as making materials. In addition, the broomstick part plays a very important role in meeting the need for food, namely coconut water which is processed into nata de coco products, soy sauce or can be drunk fresh as well as the flesh of the fruit which is a source of oil and fat, protein, carbohydrates, vitamins B and C. other food additives, so the nutritional value may also vary.

One of the processed coconut products is pudding. Pudding is a type of snack or what is called basa cake which is a dish at various events or can be used as a snack to be enjoyed while relaxing. This young coconut pudding is not yet known to the people of Timor Leste. Basically, making young coconut pudding uses a mixture of ingredients which functions as a texture maker. The addition of granulated sugar is an alternative for resource empowerment.

The diversity of foods is expected to reduce people's dependence on products, namely carbohydrates, especially starch, which is a source of energy for the body.

METHODS

The method used in this research is the experimental method. Meanwhile, the experimental design used was a completely randomized design (CRD) with 2 (two) factors, namely: the granulated sugar factor and the agar-agar factor, which consisted of 9 treatments with 3 replications. The first factor is Sugar Concentration (GP)

GP1: Sugar concentration 300 grams

GP2: Sugar concentration 400 grams

GP3: Sugar concentration 500 grams.

The Second Factor is Agar-Agar Concentration (AA)

AA1: Agar concentration 7 grams.

AA2: Gelatin concentration 14 grams

AA3: Gelatin concentration 21 grams.

Table 3.1: Experimental Design Treatment Combinations

Granulated Sugar Concentration

Agar-Agar Concentration

AA1 (7 gr) AA2 (14 gr) AA3 (21 gr)

GP1 (100 gr) GP1AA1 GP1AA2 GP1AA3

GP2 (150 gr) GP2AA1 GP2AA2 GP2AA3

GP3 (200 gr) GP3AA1 GP3AA2 GP3AA3

Description of Treatment Formulation:

GP1AA1: Sugar concentration 300 grams: Agar-agar concentration 7 grams

GP1AA2: Sugar concentration 300 grams: Agar-agar concentration 14 grams

GP1AA3: Sugar concentration 300 grams: Agar-agar concentration 21 grams

GP2AA1: Sugar concentration 400 grams: Agar-agar concentration 7 grams

GP2AA2: Granulated Sugar Concentration 400 grams: Agar-Agar Concentration 14 grams

GP2AA3: Sugar concentration 400 grams: Agar-agar concentration 21 grams

GP3AA1: Sugar concentration 500 grams: Agar-agar concentration 7 grams

GP3AA2: Sugar concentration 500 grams: Agar-agar concentration 14 grams

GP3AA3: Sugar concentration 500 grams: Agar-agar concentration 21 grams

RESULTS AND DISCUSSION

Results of Analysis of Variety (Anova) on Color Likeability Levels

Young Coconut Meat Pudding

SK Db JK KT F.count

F. Table

5% 1%

Treatment 8 3.20 0.40 0.45 ns 2.01 2.65

GP 2 0.53 0.27 0.30 ns 3.07 4.78

AA 2 0.00 0.00 0.00 ns 3.07 4.78

GP & AA 4 2.67 0.67 0.75 ns 2.44 3.47

Error 81 112.40 0.89

Total 89 115.60

Because the calculated F. value (0.45) < is smaller than the F. table 5% (8:126) (2.01) then accept H₀, which means that from the 9 treatments of granulated sugar and gelatin on the color of young coconut meat pudding it does not give significantly different influences.

Results of Analysis of Variety (Anova) on the level of liking for the taste of young coconut fruit pudding treatment. The average value of the BNT notation is 5%.

GP1 AA1 4.53 B

0.63

GP1AA2 4.20 ab

GP1AA3 3.87 ab

GP2AA1 3.87 ab

GP2AA2 3.60 ab

GP3AA3 3.87 ab

GP3AA1 3.87 ab

GP3AA2 3.87 ab

GP3AA3 3.40 a

Note: Different letters in the notation column indicate significantly different treatments at the 5% significance level.

Based on the 5% BNT test in table 4.4. Above that, the effect of the concentration of granulated sugar and gelatin on the taste of young coconut meat pudding. This is because if you use high concentrations of granulated sugar and gelatin, it will increase the sweet taste of the young coconut meat pudding, so it is not liked by the panelists (representing consumers).

Results of Analysis of Variety (Anova) on the level of liking for the aroma of young coconut pudding.

SK Db JK KT F.count

F. Table

5% 1%

Treatment 8 6.77 0.85 0.96 ns 2.01 2.65

GP 2 0.55 0.28 0.31 ns 3.07 4.78

AA 2 0.24 0.12 0.14 ns 3.07 4.78

GP&AA 4 5.99 1.50 1.69 ns 2.44 3.47

Error 126 111.60 0.89

Total 134 118.37

Information:

ns = Non significant

Conclusion :

Because the calculated F. value (0.96) < is smaller than the F. table 5% (8:126) (2.01) then accept H₀, which means that from the 9 treatments the concentration of granulated sugar and gelatin on the aroma of young coconut meat pudding does not provide a significantly different impact. So there is no need for further testing using 5% BNT. Because the potential is the same.

Average Value of Organoleptic Tests on Liability Levels Texture of Young Coconut Meat Pudding Treatment Average Value Notation BNT 5%

GP1 AA1 3.80 ab

0.67

GP1AA2 4.47 b

GP1AA3 3.67 a

GP2AA1 3.80 ab

GP2AA2 3.53 a

GP3AA3 3.67 a

GP3AA1 3.27 a

GP3AA2 4.53 bc

GP3AA3 3.53 a

Note: Different letters in the notation column indicate significantly different treatments at the 5% significance level.

Based on the 5% BNT test in table 4.4 above, the effect of granulated sugar and agar agar concentration treatment affects the texture of young coconut meat pudding. This is because if high concentrations of granulated sugar and agar agar are used it will increase The texture of the young coconut meat pudding is very hard, so the panelists (representing consumers) don't like it.

In the organoleptic test of easy coconut meat pudding which includes color, it has an average value of 3.76, taste has an average value of 4.47, aroma has an average value of 4.20 and texture has an average value of 3.80. The assessment of panelists who represent the community regarding green bean pudding not only looks at its chemical quality but also looks at its physical quality. At a concentration of 10% granulated sugar and 0.7% gelatin. The young coconut meat pudding produced has a distinctive aroma of young coconut meat, tastes delicious and has a chewy, compact texture and a greenish color.

CONCLUSION

Based on the results of research on "The Effect of Granulated Sugar and Agar-Agar Concentrations on the Quality of Young Coconut Pudding" it can be concluded as follows:

1. Treatment of granulated sugar and agar-agar concentration (GPAA) can have a very significantly different effect on taste parameters and texture of young coconut meat pudding. However, the treatment of granulated sugar and agar agar concentration on taste and aroma color parameters did not have a significantly different effect.
2. The granulated sugar concentration (GP) treatment had a significantly different effect on the parameters and texture of young coconut meat pudding and was not significantly different on the color and aroma parameters. Meanwhile, the agar concentration (AA) treatment had no effect on the parameters, namely color and aroma. But there is a very different influence on taste and texture parameters. Likewise, the combination of granulated sugar and gelatin (GP&AA) has no influence on the 4 parameters, namely color, taste, aroma and texture)
3. The formulation for making young coconut pudding with a concentration of 400 grams of granulated sugar and 14 grams of gelatin can produce quality young coconut meat pudding products.

REFERENCES

- Abdul Rahman, Ir. 1982. Coconut Cultivation. Plantation Education Institute. Yogyakarta.
- Basri S., 1998. Cultivation, Processing and Marketing of Seaweed, Publisher Self-Help Jakarta.
- Deddy Muchtadi, 2009, Principles of Protein Source Food Technology, CV Publisher Alfabeta, Bandung.
- Desrosier, Norman W. 1988. Food Preservation Technology. Muchji Translator Muljohardjo. University of Indonesia Press. Jakarta.
- Djoehana Setyamidjaja, 1984. Coconut Planting, Kanisius Yogyakarta.
- F. G. Winarno., 2004. "Food Chemistry and Nutrition" Gramedia Pustaka Utama Publisher, Jakarta
- Gautara & S. Wijandi 1981. Basics of Sugar Processing I. Department of Industrial Technology, Fafemeta-IPB.
- Gautara and Soersono, 2005. "Basics of Sugar Processing" IPB, Bogor Sugar-Salt. Retrieved 29 July 2013
- Haryati Idrus., 1994. Making Dodol. Center for Development Research Agricultural Products Industry. Department of Industry.
- Kartika, B, et al. 1988. Guidelines for Sensory Testing of Food Ingredients: PAU Food and Nutrition. Gadjah Mada University Press: Yogyakarta.
- Rampengan, V.J. Pontoh and D.T. Sembel., 1985. Basics of Quality Control Food. Cooperation Agency for Eastern Indonesian State Universities, Ujung Pandang.
- Sastrosupadi, A. 2000. Practical Experiment Design in Agriculture. Edition Revised. Kanisius. Yogyakarta.
- Soekarto, S.T. 1985. Organoleptic Assessment for the Food and Agricultural Products Industry. Bharata Karya Literacy: Jakarta
- Soetedjo, R. 1969, Coconut. Yasaguna Publishers, Jakarta.
- Soewedo Hadiwiyoto, 1983, Dairy, Meat and Egg Processed Products, Liberty Publishers, Yogyakarta.
- Sudarmadji, S., B. Haryono and Suhardi, 1989. Analysis of Food Ingredients and Agriculture. Third edition. Liberty Yogyakarta.
- Susanto T. and Saneto B. 1994. Agricultural Product Processing Technology, PT. Build Jakarta Science
- Indonesian Food Composition Table (TKPI). 2008. Food Composition Table Indonesia. Jakarta: Swadaya Spreader. Yogyakarta.
- Winarno F. G., 1984. Food, Technology and Consumers, Gramedia Publishers Main Library, Jakarta
- Winarno, F.G., S. Fardiaz and D. Fardiaz. 1982. "Introduction to Food Technology". Publisher PT. Scholastic. Jakarta.