

PAPER • OPEN ACCESS

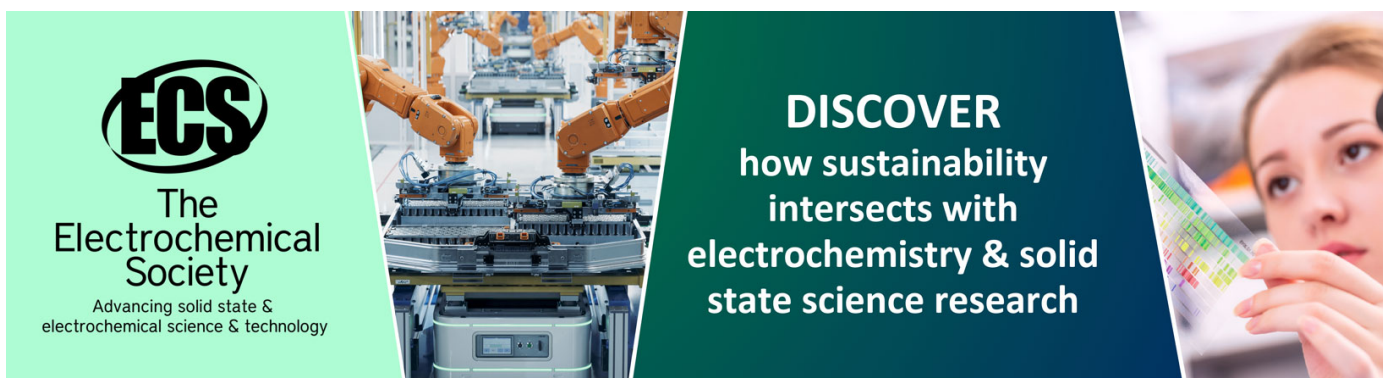
Analysis of consumer acceptance on instant uduk rice reviewed from variant taste

To cite this article: Niken Purwidiani *et al* 2019 *IOP Conf. Ser.: Earth Environ. Sci.* **347** 012081

View the [article online](#) for updates and enhancements.

You may also like

- [Consumer perception and acceptance of pork and chicken sausage](#)
M Risti, K Troeger, J inovi-Stojanovi et al.
- [Synthesis of Flower-Like Iron Oxide Capped Tripolyphosphate for Electrochemical Detection of Carbadox Drugs in Meat](#)
Arumugam Sangili, Muthaiah Annalakshmi, Shen-Ming Chen et al.
- [Specific primer design of mitochondrial 12S rRNA for species identification in raw meats](#)
M Cahyadi, Puruhita, F H Barido et al.



ECS
The
Electrochemical
Society
Advancing solid state &
electrochemical science & technology

DISCOVER
how sustainability
intersects with
electrochemistry & solid
state science research

Analysis of consumer acceptance on instant uduk rice reviewed from variant taste

Niken Purwidiani¹, Dwi Kristiastuti Suwardiah², Yuyun Irawati³

Home Economic Department, Faculty of Engineering, Universitas Negeri Surabaya. Email: (1) nikenpurwidiani@unesa.ac.id, (2) dwikristiastuti@unesa.ac.id, (3) yuyunirawati@unesa.ac.id

Abstract. This study aims to analyze consumer acceptance of instant uduk rice products with flavor variants using shrimp, squid and chicken. The type of research was experimental with 100 respondents consisting of students and lecturers in Home Economics Department, Faculty of Engineering, Universitas Negeri Surabaya. Methods of data collection using observation by organoleptic test include preference on: colour, aroma, taste, texture, and liking on instant uduk rice product using questioner. Data analysis technique using SPSS 21.00 computer program that is by ANOVA test. The results of consumer assessment of uduk rice products to taste of shrimp, squid and chicken varieties showed a very significant value based on colour, aroma, taste, texture, and favourite level. It can be concluded that instant uduk rice in terms of flavour variants (shrimp, squid, and chicken) can be accepted by consumers where chicken flavour variant that is highly favoured by consumers.

1. Introduction

Along with the development of science and technology, today people want everything that is fast, easy and practical [1]. The preparation of rice for so long, especially for the busy community, is the main obstacle so they are lazy to cook rice. Various attempts have been made to produce quick-cooked rice or quick cooking rice or also called instant rice, fast-food rice or post-boiled rice, with the aim of speeding up cooking time [2]. Basically the manufacture of instant food products is done by removing the water content so that it is easily handled and practical in its supply. The form of instant food is usually easy to add water (cold/hot) and easily dissolved so that it is easy to eat [3].

One of the typical Indonesian foods based on rice is favoured by people from various backgrounds, namely uduk rice. Uduk rice is a dish made from white rice with the addition of coconut milk and spices, usually served together with fried chips, omelet, shredded, dried tempeh, fried onions, fried chicken, cucumber and sambal (chili sauce). Uduk rice is rice which is added with coconut milk so that it has a savory taste. Uduk rice is seasoned rice processed and served with dry side dishes such as fried chicken dishes, anchovies fried shrimp / shrimp, and fried/ meat [4].

The process of making instant uduk rice generally consists of the preparation stage, processing stage, and presentation stage. The processing stage consists of the mixing process, the boiling process, the steaming process and the process of drying the material. Before making instant uduk rice, it is necessary to know the characteristics of rice used as raw material. Many factors influence the starvation of rice and rice texture during storage, including rice varieties, storage conditions, amylose content, starch type, level of siltation, ratio of water and rice, cooking methods, cooling methods, etc [5]

As one of the popular foods, nasi uduk can be developed into instant food. Instant uduk rice has several advantages, namely the cooking process does not require a long time and has a long shelf life. Technological advances and age demands are able to change tastes and preferences, with increasing



population, the more complex consumption patterns that develop in the community. The more people tend to demand the supply of varied and nutritious food products in addition to the delicious taste, so we need a way to meet these consumer needs. One of the ways is by making instant uduk rice with the addition of flavour such as the addition of chicken, beef, shrimp, squid, anchovy, salted fish and so on.

The results of research conducted by Kristiastuti, et al. [6] explained that instant uduk rice products with the addition of chicken meat showed the level of consumer acceptance that is very like 84.8% in colour, 91.2% in flavour, 89.7% in aroma % and texture/softness by 81.7%. Based on the results of the study it can be concluded that consumers are very fond of uduk rice products which are added with flavour in the form of chicken meat. In addition to chicken meat, it turns out that instant uduk rice can be added to other flavours, namely by adding seafood, adding seafood in the form of shrimp and squid to instant uduk rice is an attempt to enrich the variety of seasoned rice processing which is instant or easy to serve. The research that is being carried out is in line with research conducted by Kristiastuti, et al [4], where the results of the study showed the highest average value of respondents' assessment of instant uduk rice products with seafood flavour (shrimp and squid) on the taste and preference criteria. The difference in research lies in the stage of the process of consumer acceptance analysis of instant uduk rice products with variants of using, shrimp, squid, and chicken meat where the aspects of instant uduk rice assessment observed include: aroma, taste, colour, texture, and liking.

The use of shrimp, squid and chicken flavour variants for instant uduk rice products aims to increase consumer acceptance seen from the quality of the organoleptic product, so that it is expected that instant uduk rice products that are produced can increase the marketability of products. Based on this background, the authors are interested in analyzing consumer acceptance of instant uduk rice products with flavours using shrimp, squid, and chicken meat.

2. Materials and Methods

2.1. Material Preparation

The initial stage of the research is preparation of ingredients to make instant uduk rice using a variant of shrimp, squid, and chicken meat. The ingredients can be described in Table 1 as follows.

Table 1. Instant Uduk Rice Materials

No.	Name of Material	Proportion
1.	Rice	50%
2.	Water Broth	45%
3.	Coconut milk	20%
4.	Chicken / Shrimp / Squid	20%
5.	Salt	1.2%
6.	Sugar	1,0%
7.	Lemongrass	2.0%
8.	Garlic	2,0%
9.	Candlenut	1.5%
10.	Lime leaves	0.3%
11.	Bay leaf	0.3%
12.	Coriander	0.5%

Based on the Table 1, main ingredients consist of: rice, broth, coconut milk and flavoured ingredients (consisting of chicken fish meat, shrimp meat and squid), while the seasoning uses consist from salt, sugar, lemongrass, garlic, candlenut, orange leaves, bay leaves and cilantro in certain proportions as seen in the table above.

2.2. Making Process

The process of making instant uduk rice using shrimp, squid, and chicken meat variants consists of the preparation stage, processing stage, and presentation stage. The preparation stage is carried out to

prepare all the main ingredients and spices used for further processing into instant uduk rice products. The next stage is processing, at this stage consists of the mixing process, boiling process, steaming process and material drying process. The processing process in making instant uduk rice using complete flavours can be seen in Figure 1.

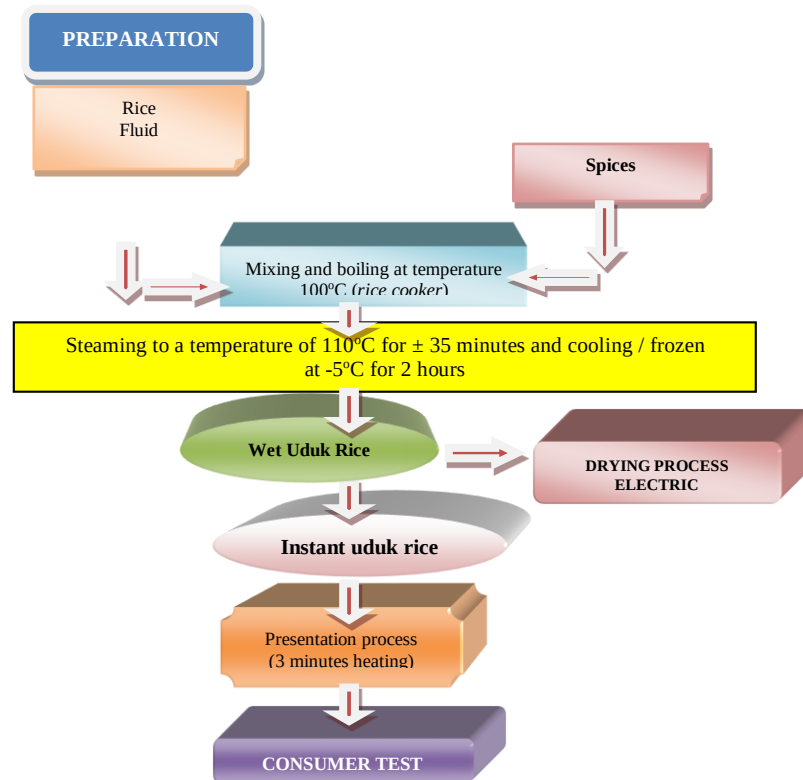


Figure 1. Instant Uduk Rice Making Process Using Variant Flavor of Shrimp, Squid, and Chicken Meat

2.3. Research Methods

The type of research being conducted is experimental with 100 respondents consisting of students and lecturers in the Home Economics Department, Faculty of Engineering, Universitas Negeri Surabaya. The instrument used to obtain data in the study related to consumer acceptance of the test of preference on organoleptic properties of shrimp, squid, and chicken meat variants including: aroma, taste, color, texture, and liking in instant uduk rice products using a questionnaire. Data collection method uses observation by organoleptic testing on instant uduk rice products using a Likert scale (1-4 scale) with the following criteria: very like (score 4), like (score 3), quite like (score 2), dislike (score 1). Data analysis techniques using SPSS 21.00 computer program is by ANOVA test.

3. Results and Discussions

3.1. Descriptive Test

The results of consumer appraisal of instant uduk rice products for shrimp, squid and chicken flavours showed a very significant value based on colour criteria, aroma, taste, texture, and favourite level. The descriptive test results of the average value of consumer acceptance of instant uduk rice products can be seen in Figure 2.

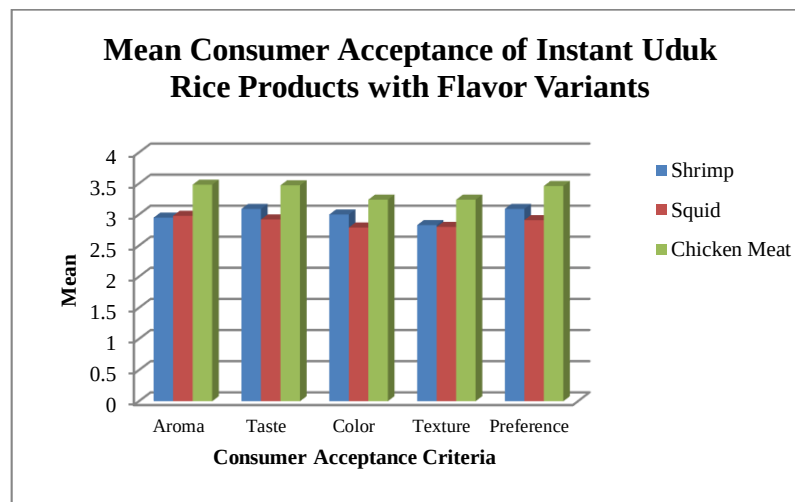


Figure 2. Mean Consumer Acceptance of Instant Uduk Rice Product Using Variants of Flavour Shrimp, Squid, and Chicken Meat

Based on the picture above, obtained the mean of consumer assessment of instant uduk rice products of shrimp, squid, and chicken meat flavours which is on the aroma criteria for shrimp has a mean value of 2.95, squid is 2.98 and chicken meat is 3.48; taste criteria for shrimp has a mean value of 3.09, squid is 2.92 and chicken meat is 3.47; colour criteria for shrimp have a mean value of 3.00, squid is 2.79 and chicken meat is 3.24; texture criteria for shrimp have a mean value of 2.83, squid of 2.8 and chicken meat of 3.24; and the liking for shrimp has a mean value of 3.09, squid of 2.91 and chicken meat of 3.46.

The results showed that the use of chicken meat flavours had the highest average values on all criteria of instant uduk rice flavoured variants which included: aroma, taste, colour, texture, and favourite level. Based on the data obtained, it can be concluded that the average rating of respondents likes instant uduk rice products using chicken meat flavours. This is consistent with the results of research conducted by Kristiastuti (2015) which explains that consumers like chicken meat flavours in instant uduk rice products produced.

3.2. ANOVA Test

Organoleptic assessment results using Anova test for instant uduk rice products using flavors of shrimp, squid, and chicken meat on the criteria of aroma, taste, color, texture, and liking will be described in Table 2. Anova test results in the table above can be explained that the level of consumer acceptance of instant uduk rice products in shrimp, squid, and chicken meat flavors on the aroma criteria has an F test value of 16,696 with a significant level value (Sig.) Of 0,000 (below 5%); the taste criteria has an F test value of 14,321 with a significant level value (Sig.) of 0,000 (below 5%); the color criteria has an F test value of 8.420 with a significant level (Sig.) of 0.000 (below 5%); the texture criteria have an F test value of 10.178 with a significant level (Sig.) of 0.000 (below 5%); and on the liking criteria have an F test value of 15.444 with a significant level (Sig.) of 0.000 (below 5%).

Based on the ANOVA test results, it can be explained that the use of shrimp, squid, and chicken meat variants in instant uduk rice products has a very significant effect on all observed criteria, namely the aspects of aroma, taste, colour, texture, and preference. This means that the level of acceptance of instant uduk rice products from shrimp, squid, and chicken meat variants is well accepted by consumers. The next test that can be done is the Duncan test to find out which flavours of the three flavours (shrimp, squid, and chicken) in instant uduk rice products based on the criteria of aroma, taste, colour, texture, and liking can be seen in Table 3.

Table 2. ANOVA Instant Uduk Rice Products Using Variants of Shrimp Flavour, Squid, and Chicken Meat

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Aroma	Between Groups	17,727	2	8,863	16,696	,000
	Within Groups	157,670	297	,531		
	Total	175,397	299			
Taste	Between Groups	15,860	2	7,930	14,321	,000
	Within Groups	164,460	297	,554		
	Total	180,320	299			
Color	Between Groups	10,140	2	5,070	8,420	,000
	Within Groups	178,830	297	,602		
	Total	188,970	299			
Texture	Between Groups	12,087	2	6,043	10,178	,000
	Within Groups	176,350	297	,594		
	Total	188,437	299			
Favorite level	Between Groups	15,727	2	7,863	15,444	,000
	Within Groups	151,220	297	,509		
	Total	166,947	299			

Table 3. Duncan Test Results Instant Uduk Rice Products Based on The Criteria of Colour, Aroma, Taste, Texture, and Favourite Level

Aroma				
		Subset for alpha = 0.05		
	Treatment	N	1	2
Duncan ^a	Squid	100	2,9500	
	Shrimp	100	2,9800	
	Chicken	100		3,4800
	Sig.		,771	1,000

Taste				
		Subset for alpha = 0.05		
	Treatment	N	1	2
Duncan ^a	Squid	100	2,9200	
	Shrimp	100	3,0900	
	Chicken	100		3,4700
	Sig.		,107	1,000

Color				
		Subset for alpha = 0.05		
	Treatment	N	1	2
Duncan ^a	Squid	100	2,7900	
	Shrimp	100	3,0000	
	Chicken	100		3,2400
	Sig.		,057	1,000

Texture				
		Subset for alpha = 0.05		
	Treatment	N	1	2
Duncan ^a	Squid	100	2,8000	
	Shrimp	100	2,8300	
	Chicken	100		3,2400
	Sig.		,783	1,000

Liking				
		Subset for alpha = 0.05		
	Treatment	N	1	2
Duncan ^a	Squid	100	2,9100	
	Shrimp	100	3,0900	
	Chicken	100		3,4600
	Sig.		,075	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,000.

Based on the Duncan test results in Table 3 above, it can be explained that there are significant differences in the treatment of the use of squid, shrimp and chicken material variants based on the criteria of colour, aroma, taste, texture, and level of preference for instant uduk rice products, where the use of chicken meat is a variety of ingredients that are highly initiated by consumers compared to variations in ingredients using shrimp and squid. The taste and aroma of instant uduk rice products using chicken flavour variants taste more savoury typical of chicken meat aroma [7].

4. Conclusions

The results of consumer acceptance of instant uduk rice products for shrimp, squid and chicken flavours showed very significant values based on colour, aroma, taste, texture, and level of favourite level. It can be concluded that instant uduk rice in terms of flavours (shrimp, squid, and chicken) can be accepted by consumers where a chicken flavour variant that is highly preferred by consumers.

References

- [1] Prasetyo, F. dan Julianingsih. (2003). Penentuan Kondisi Pengolahan dan Penyajian Bumbu Rawon Instan Bubuk Dengan Metode Taguchi. *Jurnal Teknik Industri*. Vol 5.
- [2] Koswara, S. 2005. *Teknologi Pengolahan Makanan*. Jakarta: Pustaka Sinar Harapan.
- [3] Hambali, E., A. Suryani dan M. Rivai. 2015. *Membuat Aneka Bumbu Instan Kering*. Penebar Swadaya, Jakarta.
- [4] Kristiastuti, Dwi, dan Bahar, Asrul. 2016. Analisis Kelayakan Produk Nasi Uduk Instan (Studi Penerimaan Konsumen Ditinjau Dari Tingkat Kesukaan). Laporan Hasil Penelitian LPPM Unesa, Surabaya. Tidak di Publikasikan.
- [5] Singh N, Kaur L, Sodhi NS, Sekhon KS. Physicochemical, Cooking and Textural Properties of Milled Rice From Different Indian Rice Cultivars. *Food Chemistry*. 2005; 89: 253–259.
- [6] Kristiastuti, Dwi, dan Bahar, Asrul. 2015. Analisis Kelayakan Produk Nasi Uduk Instan (Studi Penerimaan Konsumen Ditinjau Dari Tingkat Kesukaan). Laporan Hasil Penelitian LPPM Unesa, Surabaya. Tidak di Publikasikan.
- [7] Kristiastuti, Dwi. 2012. *Modul Bahan Ajar Pengelolaan Makanan Nusantara*. Surabaya: Unesa Press.