

Original Article

e-ISSN: 2581-0545 - <https://journal.itera.ac.id/index.php/jsat/>



Hedonic Test Method for Measuring Instant Pindang Seasoning Powder Preferences

Received 27th June 2019
Accepted 11th August 2019
Published 30th August 2019

Open Access

DOI: 10.35472/jsat.v3i1.195

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Abstract: Instant seasoning for cooking are commonly known by people who want something practical. Pindang is a typical food of Lampung and South Sumatra Province, consisting of various spices and herbs. Instant pindang seasoning powder made with foam mat drying method using 3 variations of foam additives. The purpose of this study was to determine the level of taste, aroma, and color of instant pindang seasoning powder made with three variations of foam additives, namely 5% (w/w), 10% (w/w), and 15% (w/w). The hedonic test for instant pindang seasoning powder were carried out on 35 panelists. Panelists were faced with 3 samples with 3 different sample numbers. Panelists were asked to assess how much preference for seasoning products using hedonic scale. The hedonic test results showed that, with the addition of 15% (w/w) foam is preferred in terms of color. As for aroma and taste, there were no significant differences between the three products.

Keywords: *foam mat drying, hedonic test, instant pindang seasoning powder, pindang*

Introduction

Pindang is a typical food of Lampung and South Sumatra Province. It consists of various kinds of herbs and spices. Pindang cuisine usually contains Patin Fish (*Pangasius hypophthalmus*) or Baung Fish (*Mystus nemurus*) with a broth rich in herbs and spices.

Nowadays, people are required to be fast and practical. Not only to simplify the work process, but also related to time efficiency. Instant cooking seasonings have several advantages, i.e., practical because consumers do not have to bother to provide a variety of spices, especially those that are not in their area. Another advantage of instant cooking seasonings is that it makes it easier for people who cannot cook a certain food so that it is easy to cook the food. In addition, instant cooking seasonings also have a relatively longer shelf life than fresh herbs.

On the market there are a lot of instant food products including instant seasonings, but until now no instant seasonings have been found for pindang cuisine. Instant pindang seasoning powder in this research has been made using the foam mat drying method [1]. This research is a follow-up study from the previous research [1] that aims to determine the level of consumer preference for instant pindang seasoning powder with the hedonic test method.

Method

Hedonic test for instant pindang seasoning powder were carried out using 35 untrained panelists. Untrained panelists are a group of average-skilled people who are not formally trained, but have the ability to distinguish and communicate reactions from tested organoleptic assessments. The number of untrained panelists ranges from 25-100 people [2].

Panelists were faced with 3 samples with sample codes 365 (5% w/w foam addition), 125 (10% w/w foam addition), and 256 (15% w/w foam addition). Panelists were asked to assess how much they liked the color, taste, and aroma of seasoning products. The scale given is as follows: 1.Very Like, 2.Like, 3.Neutral, 4.Don't Like. The data were analyzed using SPSS (Statistical Product and Service Solution) version 17 with the method of analysis of variance (ANOVA) at the 95% confidence level.

Results And Discussion

Sensory evaluation is a science used to generate, to measure, to analyze, and to interpret responses to products that are sensed by the sense of sight, smell, taste, and hearing. The human senses are strongly



influenced by sensitivity, experience, psychological conditions, and physical conditions [3].

Sensory evaluation is widely used to assess quality in the food industry and other agricultural industries. Sometimes this assessment can give a very careful assessment. In some respects sensory judgment even exceeds the accuracy of the most sensitive instruments. The sensory evaluation method can be classified into several groups: Difference Test, Selection/Acceptance Test Group, Scalar Testing Group, and Description Testing Group. Hedonic tests are included in the Acceptance Test [4].

Hedonic tests are designed to measure degree of liking for a product. Category scales ranging from like extremely, through neither like nor dislike, to dislike extremely, with varying numbers of categories, are used. Panelists indicate their degree of liking for each sample by choosing the appropriate category [5].

Color

The result of color hedonic test of instant pindang seasoning powder is served in Table 1.

Table 1. Color test of instant pindang seasoning powder

Sample Code	Color Score
365 (5% w/w)	3.80 ^a
125 (10% w/w)	2.46 ^b
256 (15% w/w)	1.31 ^c

Different superscripts in the same column showed significantly different ($p < 0.05$) using One Way ANOVA. The scale given is as follows: 1. Very Like, 2. Like, 3. Neutral, 4. Don't Like

From Table 1 can be seen that 365 sample code (instant pindang seasoning powder with 5% foam addition) has the highest score (3.8) compared with 125 and 256 sample code, which have 2.46 and 1.31 score, respectively. It means, panelists prefer instant pindang seasoning powder with the addition of 15% foam addition because it has a brighter color than the other two instant seasonings.



Fig.1. The appearance of three instant pindang seasoning powder

The appearance of three instant pindang seasoning powder is served in Fig. 1. Color is the first sensory that can be seen directly by panelists. The determination of the quality of food generally depends on the color it has, the color that does not deviate from the color which should give the impression of a separate assessment by the panelist [6].

In the food industry, color is has become more and more important in terms of how food is displayed and sold, and thus it is an indicative parameter used in quality control. It is also added to foods to stimulate the appetite [7].

Aroma

The result of aroma test of instant pindang seasoning powder is served in Table 2.

Table 2. Aroma test of instant pindang seasoning powder

Sample Code	Aroma Score
365 (5% w/w)	2.71 ^a
125 (10% w/w)	2.69 ^a
256 (15% w/w)	2.63 ^a

Different superscripts in the same column showed significantly different ($p < 0.05$) using One Way ANOVA. The scale given is as follows: 1. Very Like, 2. Like, 3. Neutral, 4. Don't Like

Table 2 showed that the panelists' preference for instant pindang seasoning has no significantly difference between three sample codes.

Aroma perception is a determinant factor in food choices and acceptability by consumers. To be perceived, aroma compounds must be released in the mouth during food breakdown, transferred into the nasal cavity to reach the olfactory receptor and then be perceived [8]. Aroma is a smell caused by chemical stimulation that is smelled by olfactory nerves in the nasal cavity [6].

Taste

Taste test of instant pindang seasoning powder carried out by dissolving instant seasonings into water (1:10 w/v). The result of taste hedonic test of instant pindang seasoning powder is served in Table 3.

Table 3 showed that no significant differences were found between three sample codes. The sense of taste informs the organism about the quality of ingested food. Five basic taste modalities, e.g., sweet, sour, bitter, salty and umami have so far been identified [9].

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*Journal of Science and Applicative Technology***Table 3.** Taste test of instant pindang seasoning powder

Sample code	Taste Score
365 (5% w/w)	2.31 ^a
125 (10% w/w)	2.11 ^a
256 (15% w/w)	2.17 ^a

Different superscripts in the same column showed significantly different ($p < 0.05$) using One Way ANOVA. The scale given is as follows: 1. Very Like, 2. Like, 3. Neutral, 4. Don't Like

The taste buds can be divided into four main gaps, namely sweet, bitter, sour, and salty. There are additional responses that occur when modifications are made, including: wry, spicy, hot, cold, and so on. Sensitivity of the taste is found at the tips of the tongue, each distributed to four types of receptor regions, namely the sweet taste at the tip of the tongue, the bitter taste at the base of the tongue, the sour taste on the back side of the tongue, and the saltiness on the front side of the tongue. The difference in perception of taste between each person depends on age, gender, and smoking habits [10].

Conclusions

Preference tests for the color of instant pindang seasoning powder products using hedonic tests showed that instant seasoning with 15% foam addition were most preferred. While the preference test for the aroma and taste of instant pindang seasonings does not show a significant difference between the three products.

Conflicts of interest

The authors declare that the article has no conflict of interest regarding the publication.

Acknowledgements

This work was financially supported by Hibah Penelitian ITERA Smart Mandiri 2018 No: 212/IT9.C1/PP/2018 from Institut Teknologi Sumatera.

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