

Product Experiment of Making Organic Lip Balm by Adding Parijoto Extract

Novi Etty Kona'ah¹ and Muhammad Ansori²

^{1,2}Department of Family Welfare Education, Faculty of Engineering, State University of Semarang, E7 Building, Sekaran, Gunung Pati, Semarang 50229, Indonesia
ophie.opek@yahoo.com¹

Abstract— Lip balm is a lip care cosmetic which is useful to moisturize and soften the lips. Lip balm is made of emollient ingredients such as virgin coconut oil, olive oil, honey, beeswax and fruit juices that contain vitamin C. One of the fruit which is rich in vitamin C is parijoto fruit. Parijoto fruit is a wild plant in the form of small round purplish red. To add vitamin C in the lip balm then the writer used parijoto fruit. Objectives of the study: 1. Finding out the quality of production including sensory quality, society preference level test, chemical test and product storage capacity. 2. Finding out sensory quality differences from the aspect of color, scent, texture, color, comfortable wear, and form of packaging. The population and sample of this research included: parijoto fruit, VCO, olive oil, beeswax, honey. To retrieve the fruit color of parijoto, the researcher conducted alcoholic extraction process. In this study, in determining the quality of the product, the researcher used the sensory test, society preference level test, and the content of vitamin C test. If there was a difference in quality, it would be used analysis of variance single classification. The results of this study: 1. There were differences in the sensory quality of the experimental production of organic lip balm with the addition of parijoto fruit extracts among samples. 2. Based on the test results of the public's preferences, it was known that all of the three samples of lip balm experimental results were favored by the society regarding the aspect of color, scent, texture and flavor. The level of society preferences to the all samples was 80%. 3. Based on the laboratory test results, in sample 254 possessed vitamin C 179.06 mg/g, sample 201 possessed vitamin C 180.46 mg/g, sample 305 possessed vitamin C 198.14 mg/g, and sample 404 possessed vitamin C 216.28 mg/g.

Keywords— Lip balm organic, Parijoto fruit, Vitamin C

I. INTRODUCTION

Lip balm is a lip care cosmetic which is useful to moisturize the lips (Intan, 2015). In addition to moisturizing, lip balm is also expected to soften the lips, and therefore lip balm is made using emollient materials such as olive oil, VCO, or honey that has vitamin C. Vitamin C is widely contained in fruits. One of them in which rich in vitamin C is Parijoto fruit. Parijoto fruit is a wild plant that is often found in the mountains of Muria Kudus. This fruit has a myth that is believed by people around Kudus. It is believed that if this fruit is consumed by pregnant women, the child will be born to be beauty or handsome (Wibowo et al, 2012). The high of vitamin C contained in this parijoto fruit, expected to be in a product for lip care, namely through the production of organic lip balm. In the making of organic lip balm, Parijoto fruit will

be used as the main material that are expected to be useful to moisture and nourish lips because of its high vitamin C. the myth about this fruit can be an additional value to this product. From the description above, an experiment was conducted in making lip balm with the addition of Parijoto organic fruit extract.

Research problems of this study: 1. How is the quality of the production including sensory quality, community preference level testing, chemical testing and product storage capacity of the product. 2. Is there any sensory quality differences from the aspect of color, scent, texture, color, comfortable wear, and form of packaging. Objectives of the study: 1. Finding out the quality of the production such as sensory quality, society preference level test, chemical test and product storage capacity. 2. Finding out sensory quality differences from the aspect of color, scent, texture, color, comfortable wear, and form of packaging. The significances of this study: 1. Providing deeper insights of science and technology for students. 2. Finding the local materials to be processed into organic lip balm and improve nutrition and increase the variety of lip balm. 3. Contributing to the public who wish to create and develop organic lip balm with parijoto fruit extracts especially in the beauty field.

II. METHODOLOGY

The population and sample of this study was the main material of organic lip balm production by adding Parijoto fruit extract such as: Virgin Coconut oil brought from Marwah Store Semarang, VCO which was chosen was Vicoma, clear white liquid with a distinctive scent of virgin coconut oil. Honey brought from Marwah Shop Semarang, preferred honey is natural honey by Marwa, produced by Al-Ghuroba, textured thick and brown. Beeswax brought from Indrasari Stadion Semarang, it has white small round flat shaped. Olive oil brought from Indrasari Stadion Semarang, the olive oil branded by Pomace Olive Oil, and it has clear yellow liquid. Parijoto fruit brought from Pesanggrahan market, Colo Muria Kudus, the Parijoto fruit chosen was the ripe purplish red one.

The independent variable in this study was the addition of Parijoto fruit extracts as many as 10ml, 15ml, and 20ml. The dependent variable in this study was the sensory quality aspects of color, scent, texture, flavor, convenience of use, the form of packaging, vitamin C, and the storage capacity of the product. Control variables in this study were the condition of the material, the

condition of the process, the stirring in which must be continuous, and the time-making process.

Methods of collecting data were using subjective and objective assessment. Subjective assessment performed by conducting sensory and preference test, whereas the objective assessment performed by conducting a laboratory test. Data analysis techniques in this study were using analysis of variance single classification and data analysis to determine the level of public preferences using descriptive analysis percentage. Laboratory tests conducted to determine the content of vitamin C in organic lip balm experimental results.

TABLE I. MEAN QUALITY RATINGS OF LIP BALM PRODUCTION WITH THE ADDITION OF PARIJOTO ORGANIC FRUIT EXTRACT

Aspects	254	Criteria	201	Criteria	305	Criteria	404	Criteria
	Mean		Mean		Mean		Mean	
Parijoto's Color	1	Unclear	2.33	Less Clear	3.33	Clear Enough	4	Clear
Parijoto' Scent	5	Unclear	5	Unclear	5	Unclear	4.76	Unclear
Renciditi's Scent	5	Unclear	4.76	Unclear	4.76	Unclear	3.33	Less Clear
Texture	5	Very Soft	5	Very Soft	4.76	Very Soft	4.33	Very Soft
Flavor	5	No Taste	5	No Taste	4.76	No Taste	2.67	Sour
Comfortable Wear	4.67	Comfortable	4.76	Comfortable	4	Comfortable Enough	2.33	Less Comfortable
Form of Packaging	5	Practical	5	Practical	5	Practical	5	Practical

Description:

- 254 : organic lip balm with additional 0ml Parijoto fruit extracts
- 201 : organic lip balm with additional 10ml Parijoto fruit extracts
- 305 : organic lip balm with additional 15ml Parijoto fruit extracts
- 404 : organic lip balm with additional 20ml Parijoto fruit extracts

TABLE II. RESULTS OF ANALYSIS USING VARIANCE SINGLE CLASSIFICATION

No.	Aspects	F _{count}	F _{table}	Description
1	Parijoto's Color	9.68	4.76	There is difference
2	Parijoto' Scent	1	4.76	There is no difference
3	Renciditi's Scent	5.36	4.76	There is difference
4	Texture	2.2	4.76	There is no difference
5	Flavor	19.43	4.76	There is difference
6	Comfortable Wear	7.71	4.76	There is difference
7	Form of Packaging	0	4.76	There is no difference

Based on Table 2 about the value of $F_{count} < F_{table}$, it can be concluded that there are differences in the color aspect of Parijoto, renciditi's scent, flavor, comfortable wear, and the form of packaging to the four samples of organic lip balm experimental results, while there was no difference found in the scent and texture aspect of Parijoto.

According to the differences in sensory quality in the aspect of color that was used, the greater the volume of fruit extracts in the production of lip balm Parijoto then the the clearer the color of Parijoto organic fruit resulting in lip balm.

This happens because of the Parijoto's color on organic lip balm derived from red pigment (pigment flavonoids) contained in the fruit parijoto soluble during the extraction of alcohol. Therefore, the more the use of fruit extracts on Parijoto lip balm in the production the more real the color of the Parijoto organic lip balm on experimental results.

In the aspect of Parijoto's scent, there was no real difference. From the test results, there was no sensual scent of real Parijoto in all experimental samples.

III. RESULTS AND DISCUSSION

In finding out the results of sensory quality in organic lip balm experimental results, it was analysed by using sensory test. There were 3 sensory tests carried out by trained panelists, the assessment is based on the sensory quality parameters using a numerical scale that indicates the quality of each indicator with the range of values 1 to 5. The result of this assessment could be seen in Table 1.

Furthermore, the data were analyzed using analysis of variance single classification. Results of calculation data summary analysis of variance single classification could be seen in Table 2.

Based on anava, it was proved that there were no actual scents found in the sample. It can be concluded that the extraction in this study was good because the scent of rotten fruit produced by Parijoto fruit was not real or does not scent by the panelists.

In the aspect of renciditi's scent there was a noticeable difference. This occurred because the sample 404 scented renciditi quite clear. It could be occurred due to the use of more of Parijoto's extracts which caused the wax density on a lip balm became softer. The use of VCO was one of the causes for renciditi's scent on lip balm. So that as the density of the wax on lip balm became soft then the VCO was in contact with air and causing oxidation rancidity.

In the aspect of texture there was no significant difference. Based on sensory test and anava, there was no difference in the level of softness where all samples were included in the very soft criteria. According to Intan (2015), compound organic lip balm that moisturizes and softens the lips are natural oils and ingredients containing emollien. Therefore, the addition of Parijoto fruit extracts 0ml, 10ml, 15ml, 20ml did not alter the character of lip balm texture which is very soft. The addition of Parijoto fruit extracts only affected the content of vitamin C contained in the experimental organic lip balm.

In the aspect of flavor, there was a very real difference. This was because the sample 404 of organic lip balm experimental results was quite bitter, the bitterness came from the alcohol extraction. Heating the Parijoto fruit extracts in the production of lip balm that aimed to evaporate the alcohol was not effective till the use of 20 ml extract, because there was no alcohol left.

In the aspect of user comfort, there was a difference. This occurred because the sample 404 was less comfortable because it was contained too much water. In the sample 404, the use of the addition of Parijoto fruit extracts 20ml resulted in a lot of water content in the lip balm. It made the lip balm softer, so the panelists were uncomfortable in applying it.

In the aspect of packaging forms there was no difference. Form of packaging on all samples was in practical criteria. It was because the form of the packaging used a small pot that is easy to carry anywhere and all samples used the same packaging pot.

A Hedonic test carried out for to determine public interest in organic lip balm products with the addition of parijoto fruit extracts. A test conducted by 80 untrained panelists. The panelists are not trained to assess the organic lip balm 3 samples of experimental results with aspects of color, aroma, texture, and flavor. A summary of test results more clearly seen in Table 3.

A test carried out to determine public preferences in organic lip balm products with the addition of Parijoto fruit extracts. A test conducted by 80 untrained panelists. The untrained panelists assessed the 3 samples of organic lip balm experimental results based on the aspects of color, scent, texture, and flavor. The test results could be seen in Table 3.

TABLE III. ORGANIC LIP BALM PREFERENCE TEST RESULTS

No.	Sample	Percentage (%)	Criteria
1	201	80%	Like
2	305	80%	Like
3	404	71%	Like

Based on Table 3, it could be seen that the whole of the three samples of organic lip balm with the addition of Parijoto fruit extracts including on criteria like. However, the percentage of the preference was in the different levels. The highest levels of public preference percentage found in samples of 305 and 201.

Laboratory test was conducted to determine the content of vitamin C contained in organic lip balm experimental results. Lab testing was conducted at the Department of Chemistry, Faculty of Science UNNES. The test results of the complete content of vitamin C could be seen in Table 4.

TABLE IV. TEST RESULTS OF THE CONTENT OF VITAMIN C

Sample Code	Test Result of Vit.C (mg/g)
Sample 254	179,06
Sample 201	180,46
Sample 305	198,14
Sample 404	216,28

Based on the results above, it could be seen that the more the addition of Parijoto fruit extracts the content of vitamin C in organic lip balm is increasing. In sample 254 with the addition of 0ml Parijoto fruit extracts possessed vitamin C 179.06 mg/g, sample 201 with the addition of 10ml Parijoto fruit extracts possessed vitamin C 180.46 mg/g, sample 305 with the addition of 15ml Parijoto fruit extracts possessed vitamin C 198.14 mg/g, and sample 404 with the addition of 20ml Parijoto fruit extracts possessed vitamin C 216.28 mg/g.

IV. CONCLUSION

1. There was a difference in the sensory quality of organic lip balm production with the addition of Parijoto fruit extracts between samples.
2. Based on the test results of the public's preferences, it was shown that all of the three samples of lip balm experimental results favored by the society seen from the aspect of color, scent, texture and flavor. On all the samples was obtained the level of society preference of 80%.
3. Judging from the results of laboratory testing of vitamin C found in lip balm experimental results, the greater the Parijoto fruit extracts were used then the amount of vitamin C is increasing.

REFERENCES

- [1] Intan. 2015. Lip Balm. https://www.google.co.id/url?sa=t&source=web&rct=j&url=https://ml.scribd.com/doc/238945726/Anatomi-Bibir&ved=0CCAQFjACahUKEwj2utKK9KLHahXWW44KHURhC9s&usq=AFQjCNFs1EaQ2KHrikVxHNVm6jaaajctQTA&sig2=xIczH-GEu22SV_PjgZy5vA. 18 April 2013.
- [2] Wibowo, H.A., Wasino & Dewi Lisnoor Setyowati. 2012. Kearifan Lokal Dalam Menjaga Lingkungan Hidup (Studi Kasus Masyarakat di Desa Colo Kecamatan Dawe Kabupaten Kudus). *Journal Of Educational Sosial Studies* 1 (1) : 29.