Formulation of Lipbutter Using Red Dragon Fruit's Extract (HylocereusCostaricensis)As Natural Dyes With Various Oil Phase Concentration

Yulita Sandriani
Faculty of Mathematics And Natural Sciences
Islamic University of Indonesia
Yogyakarta,Indonesia
yulitasandriani30@gmail.com

Bambang Hernawan Nugroho
Faculty of Mathematics And Natural Sciences
Islamic University of Indonesia
Yogyakarta,Indonesia

Silmi Fauzi Izza Tsani
Faculty of Mathematics And Natural Sciences
Islamic University of Indonesia
Yogyakarta,Indonesia
silmiizza@gmail.com

Yandi Syukri, M.Si
Faculty of Mathematics And Natural Sciences
Islamic University of Indonesia
Yogyakarta,Indonesia

***Abstract*—Lipbutter is a cosmetic preparation used for people with dry and cracked lips problems. One example of a fruit that can be used as a natural dye is a red dragon fruit *(Hylocereuscostaricensis)* because it contains anthocyanin pigment that serves as a color pigment. Red dragon fruit is a fruit that has several properties such as antioxidants, antimicrobials, boost the immune system and contains some good vitamins for the skin such as vitamin E, vitamin C and vitamin B three. Red dragon fruit can be used as a lip moisturizer and can overcome dry skin that will effective when used regularly. The aim of this research is to make lipbutter preparation using red dragon fruit extract as natural dye, with oil phase concentration (Oleumricini). Red Dragon Fruit extracted using a method of escaping with the extract. Made with three formulas. Lipbutter preparation is evaluated pH, melting point, and organoleptys. The results showed that the lipbutter preparations were made to have good texture and aroma but the color was not stable.It can be concluded with the addition of the concentration of castor oil (Oleumricini) to the preparation to yield the highest average pH preparation. With the right melting point also produces a pH corresponding to the physiological pH of the lips.**

Keywords: **Reddragon fruit, lipbutter, Natural Dyes, Hylocereus Costaricensis**

I. PREMINILARY

Women basically love beauty. Want to look beautiful and pleasant to look at so cosmetic products and the like are needed to support it. Cosmetics are ready-to-use preparations on the outside of the body such as the epidermis, hair, nails, lips, teeth and oral cavity, among others, to cleanse, add attraction, change appearance, protect it to stay in good condition, Improves body odor but is not intended to treat or cureanillness[1].

Lipbutter is a cosmetic preparation used for those with dry and cracked lips problems. Lipbutter is a common product that is often used by women, because the lips are considered most important in one's appearance[2].

The dragon fruit contains betalain pigments that act as pigments. That's why dragon fruit is used as a color in this experiment, this natural color as a substitute for synthetic color[3]. There are hundreds of lip color cosmetics circulating in the market with various types of colors and varying prices, but not all cosmetics are safe to use because most come from synthetic materials and cause side effects that harm the skin, for example allergies and irritants, therefore To get a harmless effect and safer results for the lips can be made with natural ingredients such as herbs or fruits. The above description becomes the reason of making lipbutter using natural color (red dragon fruit) with different oil phase concentration.

II. RESEARCH METHODS

Tools

The tools used for research include: laboratory glassware, blender, universal pH (MColorpHast ™), analytical balance (MettlerToledo®),lipbutter molds and lipbuttercontainers.

Ingridients

Ingredients: Extract of Super Red Dragon Fruit (*Hylocereuscostaricensis*), span 80, methyl paraben, paraben profile, honey, propylene glycol, cera alba, vasellinflavum, oleumricini,oleumrosae,cetylalcohol and adepslanae.

III. PROCEDURE

Processing Liquid Extract of Red DragonFruit (Hylocereus costaricensis)

Red dragon fruit collected as much as 386 grams, peeledand taken flesh, filtered taken sari, and then separated from the dregs. Blended until completely crushed ±5minutes.

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Formulation of Lipbutter

Formulation of lipbbuter was prepared as much as 13grams of batch of active ingredient content of super red dragon fruit extract with concentration such as 20% with oleumricini ratioof 8.3%,10% and 11.7%.

	Formulasi 1	Formulasi 2	Formulasi 3
AdepsLanae	1,6gram	1,6gram	1,6gram
Vasellin	9,0gram	9,0gram	9,0gram
Propilen Glikol	1,5gram	1,5gram	1,5gram
CeraAlba	6gram	6,5gram	5,5gram
Cethyl Alcohol	1,1gram	1,1gram	1,1gram
OleumRosae	0,15gram	0,15gram	0,15gram
MetilParaben	0,03gram	0,03gram	0,03gram
PropilParaben	0,03gram	0,03gram	0,03gram
OleumRicini	3gram	2,5gram	3,5gram
Span80	0,7gram	0,7gram	0,7gram
Red Dragon Fruit	7,0 gram	7,0 gram	7,0 gram

The Procedure Make of Lipbutter

The mixture 1: methyl paraben and propyl paraben are dissolved into propylene glycol inserted into the beaker glass. The Mixture 2: span 80 as this surfactant is mixed with dragon fruit juice. Mix phase 1 and phase 2. Phase 3: ceraalba, cetyl alcohol, adepslanae, vaselinflavum and Oleumricini mixed and melted at 75-80°C in porcelain cup using waterbath while stirring until melted. Combine (phase 1+ phase 2) into phase 3 to homogeneous. Add honey to the mixture. After the temperature drops to about 40°C.add oleumrosae, in the liquid state it is poured into the mold.

Quality Test of Lipbutter preparation

Organoleptic Test Evaluation of the lipbutter preparation was performed on each formula with different concentrations of Red Dragon's fruit extract. The stability evaluation of the lipbutter preparation was carried out for 3 weeks with weekly checks and the lipbutter stored at room temperature and 45ºC. Evaluation of lipbutter physical stability include: A. Physical Appearance Examination is done by observing the surface of lipbutter.B.Aroma

IV. HOMOGENEITY TEST OF LIPBUTTER PREPARATION

Homogeneity of the Preparation

Lipbutter preparations are seen homogeneously whether the color is homogeneous and there are no visible grains.

Homogeneity of Polish

Testing is done by applying lipbuter on slippery surface like back of hand or lips. . Observed reaction that occurs, positive irritation reaction is maintained by the redness, itching. (1) The presence of redness, (2) itching, (3) swelling, and (4) which does not show any reaction. With a record of testing done on people who do not have a history of the disease

pH Test

The pH of the lipbutter preparation was tested using a universal pH (MColorpHast ™), compared with lipbutter sold in the market.

Stability Test

Tested stability of the dosage every week. 1.What is the change of weight? 2. is there a change in pH? 3. is there any color change?

Test of Melting Point

Tested melting point lipbutter to know whether or not the product is produced? A good lipbutter preparation is a melting point preparation with a temperature above50°C.

Lipbutter Weight Test

Lipbutter weight testing was performed to obtain a uniformweight of lipbutter. From the result of weighing of lipbutter as much as three times replication obtained by weight of uniform lipbutter with weight range of lipbutter±13,5g.

V. RESULTS

Dragon fruit plants with identification indicate Cereus costaricensis (Briton and Rose) A. Berger, sin. Hylocereuscostaricensis L., Cactaceae tribe Indonesian's Buah Naga Merah.Extract of Red Dragon's Fruit Provided by red dragon fruit meat of 385.95 grams of 565.55 grams of fruit and liquid extract obtained as much as 45mL.

Formulation of Lipbutter Preparation

The basic ingredients used in the making of lipbutter are ceraalba and Oleumricini. The use of ceraalba in cosmetics especially for the preparation of lipbutter as hardener gives the gloss. The amount commonly used is 3% - 10%[4].

In the preparation of red fruit dragon lipbutter extract using ceraalba as much as ± 20%. Oleumricini has the advantage of being an oil phase and has a disadvantage that will make the lipbutter preparations rancid or uncomfortable, but its oily properties provide a soft and smooth texture and shiny.

In making the lipbutter extract red dragon fruit using castor oil with a concentration of ±10%. In making the lipbutter that contains Red Dragon fruit extract work 3 formulas.

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Formulasmade with various oil phase concentrations of 8.7%, 10% and 11.3%..

B. Quality Test of Lipbutter Preparation

The Testing of lipbutter products includes organoleptic tests (physical, odor, texture and color), homogeneity test of liposuction preparation, pH test irritation test, stability test and meltingpoint test.

C. Homogeneity Test of LipbutterPreparation

- Organoleptic Test Lipbutter preparations resulting from the three formulas are different colors and textures. Because the oil phase used in the formula varies. Lipbutter is good homogeneity, Color producedsoftpink coloredlipbutter.
- The results of irritation testing performed 3 people, showed no reaction that occurs on the skin such as itching, redness and others. With the record, the person tested has no history of the disease or allergies.

VI. CONCLUSION AND SUGGESTION

Conclusion

Based on the results of the research, the following conclusions can be concluded: 1. Can be made using a red dragon fruit extract with a concentration of 20% with the ratio of oil phase (Oleumricini) 8.7%, 10%, 11.3%. 2. Lipbutter made in this research including stable category despite the change of color and pH but not too significant.

The resulting melting point for concentrations of 8.3%, 10%, and 11.7%. Is 53-58^{0}C, 53-58^{0}C, 53-59^{0}C and for the resulting pH of 3.99, 3.91, 4.03. It can be concluded with the addition of 11.3% of castor oil concentration (Oleumricini) yielding the highest average pH 4.03. The highest melting point is 53-59^{0}C. The resulting preparation has a pH value corresponding to the physiologicalpHofthelips±4.

Suggestion

1. What can be done by the next researcher is doing research making lipbutter by knowing how to mix the color extract from the dragon fruit and keep the pH to remain stable duringthestorageperiod.
2. It is necessary to add the resulting color candelilla wax to remainstable.

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