

Strawberry Sensation Lip Balm

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Abstract

Lip balm is a preparation that is applied to the lips to function as a moisturizer by forming a layer of oil that does not mix on the surface of the lips. Strawberry (*Fragaria*) functions as an antioxidant and anti-inflammatory so that the strawberry fruit extract can be used as a moisturizer and will be maximized when used in the form of cosmetic products. The aim was to determine whether the ethanol extract of strawberry fruit (*Fragaria*) can be used in lip balm preparations and the difference in the ethanol extract concentration of strawberry fruit (*fragaria*) could affect the physical properties of lip balm preparations and determine the concentration of what lip balm preparations preferred by respondents. Strawberry fruit is obtained in the mountainous area of Tegal district. The extraction method used in this research is the maceration method with a concentration of 5%, 10% and 15%. The evaluation of lip balm preparations includes organoleptic test, pH test, irritation test, preference test, homogeneity test, smear test, melting point test. The results showed that the lip balm preparation of strawberry fruit extract (*Fragaria*) had no effect on the physical properties of the lip balm preparation. Formulas 1, 2 and 3 produce good physical properties, which include organoleptic tests, homogeneity tests, pH tests, melting point tests, irritation tests, and spreadability tests. Based on the preference test which includes color, aroma and moisture, formula 1 is the most preferred formula with a preference for color and aroma as much as 90% with the humidity level of 80%.

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Key Words

Lip Balm, Strawberry Extract (*Fragaria*), Physical Properties Evaluation

Introduction

Everyone's needs for cosmetics are different. However, you can it is certain that every day many people use cosmetic products. Since the past, cosmetics have been used until now, because cosmetics have it is believed to be a beautifying tool for women all over the world (Azhara and Nurul, 2011). The use of cosmetics can protect and keeps the skin moist, especially on the lips. Exposure to UV rays from the sun can damage lip keratin cells serves to protect the lips. Damaged keratin cells will peel off and fall off. In this condition, the lips will look chapped. This process will continue until all the damaged cells are replaced by new cells (Jacobsen, 2011). Whenever the surface of the lips is damaged, it becomes supple will decrease. Loss of flexibility will make the lips more cracked, such as If your lips are chapped, you need lip balm to moisturize your lips and prevent damage to the surface of the lips, the usual cosmetics used to moisturize the lips, namely lip balm.

The layer formed by lip balm is a protective layer lips from external influences (Madans, 2012 p: 15). Apart from lipstick, the lip cosmetics that women often use are lip balm. The function of using lip balm is different from lipstick. Objective The use of lip balm is more for lip

care than for its purpose makeup. Lip balm is designed to protect and maintain lip moisture. The ingredients contained in lip balm are substances moisturizer and vitamins for lips (Mulyawan and Suriana, 2013), vitamins useful moisturizing can be obtained naturally with use the plant as a lip balm.

Strawberry (*Fragaria*) is a plant from the Rosaceae family which has various chemical contents including, Anthocyanin, Ellagic Acid, catechin, quer-cetin, kaempferol, vitamins A, B and C. Fruit Strawberry functions as an antioxidant and anti-inflammatory so the extract Strawberries can be used as a moisturizer and will get more benefits when used in the form of cosmetic products. Strawberry is known has high antioxidant activity, namely 92.9% used as an active ingredient in skin care cosmetics to ward off free radicals.

The aim of this research is to formulate lip balm preparations using strawberry extract helps reduce black color on the lips, removes dead skin cells, softens and brightens lips. So that lips are always clean, healthy, soft and rosy (Nazliniwaty, et al 2019). In previous research (Nurmi, 2019) active substances were used rosella flower. Meanwhile, in this research the researcher wants to create lip balm preparations with different active substances. Based on background above, researchers want to make a Strawberry extract lip balm preparation (*Fragaria*) different formulations and concentrations.

Metodology

Flavanoid identification test and Ethanol Free Test Strawberry Extract. The flavonoid identification test is for determine whether there is content flavonoids in fruit extracts strawberry (*Fragaria*). From the results it can be seen in table 4.1. In the reaction the flavonoid content was carried out by adding 10 drops of extract filtrate with 96% ethanol to dissolve flavonoids. The next stage is adding HCl 2N 1 ml so that the flavonoids can be distributed optimally in a characteristic HCl solution polar, the last by dripping HCl 10 drops concentrated for the oxidation reaction to bond glycosides with discontinuous flavonoids and produces a dark red color.

The ethanol free test is to determine whether it is present whether there is ethanol content in it strawberry fruit extract (*Fragaria*). Based on the table above, it shows that strawberry fruit extract (*Fragaria*) has Ethanol free, this is proven by the smell which is generated after esterification occurs ethanol where the extract is added with acetic acid and concentrated sulfate acid has no odor and ester indicates ethanol free.

Based on the table above, it can be concluded that dfrom these three formulations produces lip balm preparations that are not contains particles and granules rough when smoothed on a glass object. So it can be said that all preparations are made has an arrangement homogeneous. This shows that the substance active and other ingredients have been mixed evenly so that it will produce maximum therapeutic effect.

The pH test in this research was carried out using how to apply a small amount of preparation on a stick. Then measure the pH using a stick pH. This pH test is carried out with the aim of determine the acidity level of lip preparations balm made. Image results can be obtained seen from table 4.5. The pH of the lip balm should be within the range of the skin of the lips ie

4.5-6.5 because if the preparation is too acidic will cause irritation to the lips whereas if the pH is too alkaline it will causes the skin on the lips to dry and cracked (Simatupang, 2018). Results pH research can be determined by formula 1, 2 and 3 have the same pH, namely 5.

This indicates that the pH corresponds to the standard pH for lip balm is pH 4.5-6.5 (Munawaroh, 2017). Formula 1: strawberry fruit extract with 5% concentration Formula II: extract strawberry fruit with 10% concentration Formula III: strawberry fruit extract with 15% concertation. The results from table 4.7 are the results of the spreadability test shows that the three lip balm formulas has good spreading power because when smeared on the back of the visible hand shiny and even. Lip balm preparation. It is said to be good if the preparation sticks on the skin evenly and looks shiny (Risnawati, 2012).

Based on the results of the irritation test carried out to 9 panelists by smearing preparation of lip balm on the skin of the forearm inner layer for 2 consecutive days, it was found that all panelists did not shows an irritant reaction, namely erythema, papules or vesicles. In the irritation test carried out on 9 panelists by applying lip preparation balm on the skin of the lips for 2 days consecutively, it was found that all panelists did not show irritation reactions, namely erythema, papules or vesicles.

Based on the results of the level of liking on the color, aroma and moisture of the lips balm that the level of liking for color shows the highest scale, namely with a score of 9 (like) the most on formula 1 with 10 respondents. This is because increasingly a little concentration of strawberry fruit extract the less color the extract will have covered with the aroma of strawberry essence. Although most respondents only I like the color it produces visually just because when applying the color there is no color go out.

Conclusion from the lip preparation preference test balm against respondents, namely Based on preference test which includes color, aroma and moisture formula 1 is a formula that most liked by favorability level on color and aroma as much as 90%, and the level of preference for humidity yield 80%. Based on results research on fruit ethanol extract lip balm preparations strawberry (*Fragraria*) shows that ethanol extract of strawberry fruit (*Fragraria*) stable lip balm preparations are made which include tests organoleptic, homogeneity test, pH test, irritation test, melting point test and spreadability test. And on test the favorites most liked by the panelists namely in formulation 1 because of the aroma and

Result and Discussion

The conclusion from this physical properties test is: all formulas have the same physical properties both in accordance with standards, on differences the concentration of the active substance has no effect on the physical properties of lip balm, in the test organoleptic color produced by the preparation namely pink, because on the preparation includes the addition of fruit essence strawberry so the color is more attractive. In the homogeneity test of the lip balm preparation indicate that the active substances and ingredients others have been mixed evenly so it can be said to be a homogeneous preparation.

The pH test produces the same pH, namely 5 which shows that the pH is produced in accordance with the pH standards of the skin of the lips namely 4.5-6.5. Lip balm melting point test results shows the same melting point, namely 50 0C. This is due to additional substances, the same formulas 1, 2 and 3 are used so it does not affect the melting point lip balm preparation. In the topical power test of the preparation lip balm when applied to the back of the hand looks shiny and even, this thing indicates that lip blam preparations meet the standards, and in the irritation test conducted on the 9 panelists obtained that all the panelists did not show irritation of the skin of the lips, such as: erythema, papules or vesicles.

Conclusion

Strawberry fruit extract (*Fragraria*) can be formulated into forms lip balm preparation with concentration 5% (F1), 10% (F2), 15% (F3). Differences in ethanol extract concentration strawberries (*Fragraria*) do not influence physical properties lip balm preparation. Formulas 1, 2 and 3 produces good physical properties, includes organoleptic tests, tests homogeneity, pH test, melting point test, test irritation, test the topical power. Based on the liking test including color, aroma and moisture formula 1 is the most formula liked by degree of liking to color and aroma as much 90%, and the level of liking for humidity produces 80%.

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