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***ACTIVITY TEST OF BESTSELLING MOISTURIZERS ON SHOPEE
IN TREATING SKIN PROBLEMS***

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Abstract

Shopee is an e-commerce widely used by Indonesians to buy and sell products and can shop safely. Shopee shows that in 2020, moisturizers was the top selling product in the beauty category. The moisturizers sold have different ingredients, come from many brands, and have different price points. The objective of the study is to compare the 3 best-selling moisturizers in the shopee category that are more effective in improving skin problems. This study was a quantitative study using a true experimental design with a posttest only control group design consisting of 4 groups, namely 3 groups using 3 best-selling moisturizer brands based on the shopee category and 1 control group. The sample of this study was selected based on the inclusion criteria consisting of 20 volunteers and the test was conducted for 4 weeks of application on the volunteers' skin by looking at the measured parameters of moisture, pores, blemishes and wrinkles. The results showed that the activity test of moisturizer A had a faster recovery in increasing moisture content (54.8%), shrinking pore size (23.8%), reducing blemishes (19.9%) and wrinkles 28.9%.

Keywords: Beauty; Bestselling; Moisturizer; Shopee

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INTRODUCTION

In this era of modern technological developments, consumer behavior is changing from buying directly in stores to purchasing online (Timotius & Octavius, 2021). According to data from Internet World Starts (2017), data display from (APJII, 2018) the development of online shopping in Indonesia continues to increase and progress. Data shows that by the end of 2017, the number of internet users in Indonesia reached 88.1 million. If calculated based on population, the number of internet users in Indonesia has reached 252.4 million people with a penetration rate of 34.9%, considering the rapid development of the internet, this number will continue to increase.

In 2020, Shopee became the most visited e-commerce in Indonesia with the number of visits to Shopee 93.4 million, Tokopedia 86.1 million, Bukalapak 35.2 million, Lazada 22 million and Blibli 18.3 million (Wulandari & Anwar, 2021). Promotions such as discounts applied by Shopee e-commerce, free shipping promotions, low prices, good product quality, and the trust given can influence online consumer purchasing decisions (Jayanti et al., 2022; Zubaidah & Latief, 2022).

Currently, skin care products that are very popular among teenagers and adults are moisturizer products. Apart from moisturizing, this skin care product also contains various vitamins that facial skin needs to keep it looking healthy. This moisturizer also brightens, maintains moisture and brighter skin because the main ingredients contain water, emollients and vitamin C and there are several moisturizers that contain ceramides or hyaluronic acid to strengthen the skin barrier so that the skin remains moist (Apriliani & Setyawati, 2023).

In Indonesia, facial skin care products are very developed, with many domestic and foreign brands. Beauty products in Indonesia cause companies in the beauty product industry to continue to develop and improve the quality of their products (Ferdinand & Ciptono, 2022). In order to improve product quality, moisturizers must come from the best ingredients (Moncrieff et al., 2013; Wagh, 2021).

RESEARCH METHOD

This study was a true experimental study with a posttest only control group design to determine the before and after conditions between the control group (which did not use moisturizer) and the

experimental group (which used moisturizer A, B and C). The sample was selected based on the best-selling moisturizer category in the Shopee application and respondents had to meet the inclusion criteria, namely 20-23 years old and willing to use moisturizer regularly for four weeks. The volunteers were divided into four groups, with the first group as the control group then the second, third and fourth groups used each moisturizer A, B and C respectively. The group division was based on the number of best-selling moisturizers, not based on skin type. Testing the skin condition of the initial and final respondents using a skin analyzer (Aramo) with the parameters to be seen are moisture, pore size, blemishes

and wrinkles. The study was carried out in March-May 2023. Treatment and application of moisturizer to the skin was carried out twice a day in the morning and afternoon. The moisturizer activity measurement data was analyzed using SPSS and processed using the t-paired method to determine whether there were changes in improving skin moisture before and after using the moisturizer.

RESULTS AND DISCUSSION

Based on the characteristics of the respondents, the results of the use of moisturizer among respondents in Table 1 include the highest volunteer age at 21 and 22 years among the volunteers sampled (21-23 years).

Table 1. Characteristics based on age of volunteers who are willing to use moisturizer for 4 weeks

Age Characteristics	Amount	Percent (%)
20 years	4	20
21 years	7	35
22 years	7	35
23 years	2	10
Total	20	100

Women who are in the productive age range of 20 to 25 years were more interested in learning about cosmetics to maintain healthy skin (Veronika et al., 2021). Based on research (Aprileny et al., 2022) in 2022, overall there were 66% female respondents, and the majority was between 20 and 25 years old. The use of cosmetics from a young age has been

widely used to care for beauty, especially with advertising on social media and the large number of e-commerce which makes it easier to obtain the desired products. (Chrisniyanti & Fah, 2022).

Water Content Measurement Results

Based on the results of examining the use of moisturizer on volunteers for 4

weeks, the results of the percentage of moisture recovery were calculated, the results of which can be seen in Figure 1. Moisturizer A from the results was the

best moisturizer with 54.8% of the total percentage of recovery of the desired skin condition.

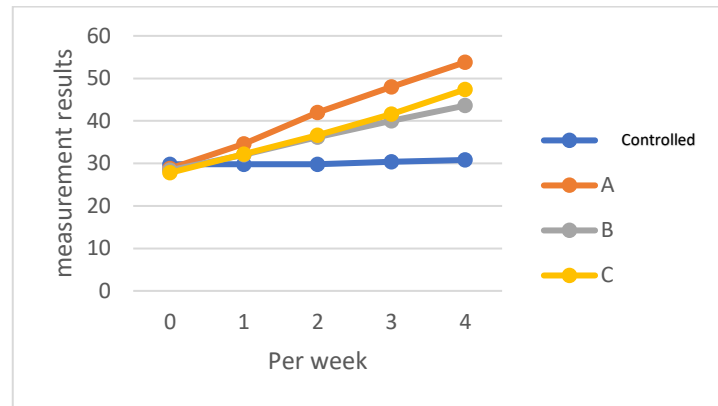


Figure 1. Skin moisture measurement results

Measuring the water content or humidity can be seen that before using the moisturizer almost all volunteers experienced dry skin (dehydration 0-29). After using the moisturizer for the experimental group there was a gradual increase making the skin normal (30-44) and hydration (45-100) using a skin analyzer, this tool measures skin moisture directly on the respondent (Prasetyo et al., 2021). However, the control group did not experience an increase but became drier. The results of the t-paired analysis before and after using moisturizer showed that there was a significant relationship ($p \leq 0.05$) for moisturizers A, B and C.

Loss of moisture in the stratum corneum and intercellular matrix causes dry, rough, scaly and cracked skin. It is necessary to use moisturizer on the skin. Moisturizers can increase the water content of the stratum corneum and hydrating agents, thereby reducing signs and symptoms of damaged skin. (Aryani et al., 2019).

Pore Measurement Results

The measurement data for all groups of volunteers before using pore moisturizer is in the large category (20-39). After using moisturizer for 4 weeks, the results of pore measurements in volunteers who used moisturizer experienced changes.

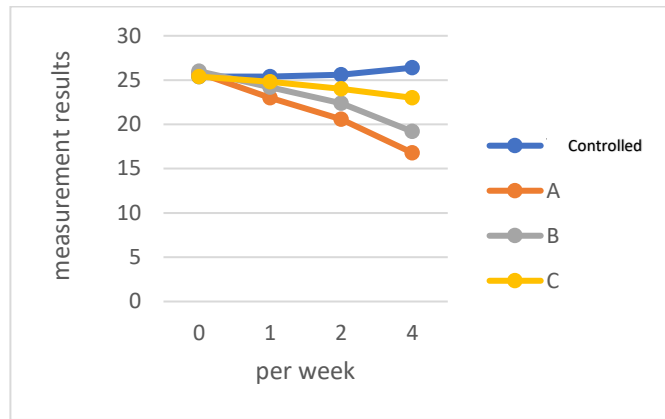


Figure 2. Pore measurement results

The results of the pore measurements can be seen in Figure 2. *moisturizer A* is the best at shrinking pores, followed by *moisturizer B* and in almost all volunteers' skin conditions, pores, some of which are large (20-39), are slightly small or normal (0-19) (Iskandar et al., 2022). Meanwhile, the control group did not experience reduction. The results of the t-paired analysis before and after using *moisturizer* showed that there was a

significant relationship ($p \leq 0.05$) for *moisturizers A, B* and *C*.

The size and fineness of pores are closely related, the smaller the pores, the smoother the skin (Wu & Tanaka, 2021).

Stain Measurement Results

Results of stain measurements on volunteers before and after use *moisturizer* for 4 weeks can be seen in figure 3. *Moisturizer A* experienced stain fading with an overall percentage of 19.9%. Results are obtained through a skin analyzer tool.

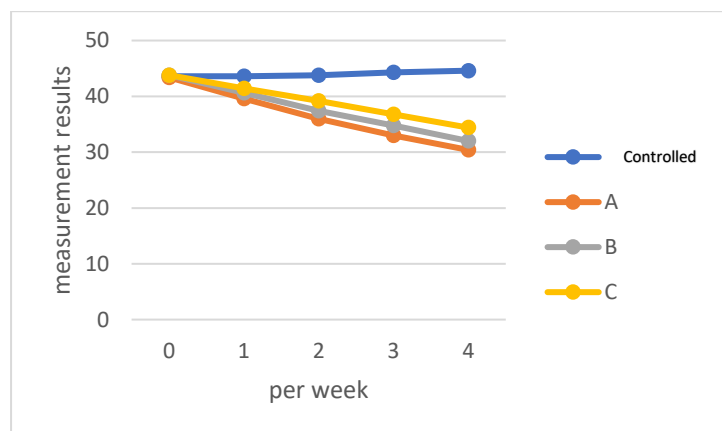


Figure 3. Results of stain measurements

Percentage of stain measurements that are present after use *moisturizer* Over the course of 4 weeks, the spots on the volunteers' skin reduced to normal. The results of the t-paired analysis before and after using moisturizer showed that there was a significant relationship ($p \leq 0.05$) for moisturizers A, B and C.

Excessive exposure to sunlight for a long time can accelerate the skin aging process, which causes blemishes to

appear, can also cause skin cancer and make skin tone uneven.(Yuliansari, 2020).

Wrinkle Measurement Results

The results of the examination of wrinkle measurements on volunteers for 4 weeks can be seen in Figure 4. *Moisturizer A* had the best reduction in wrinkles.

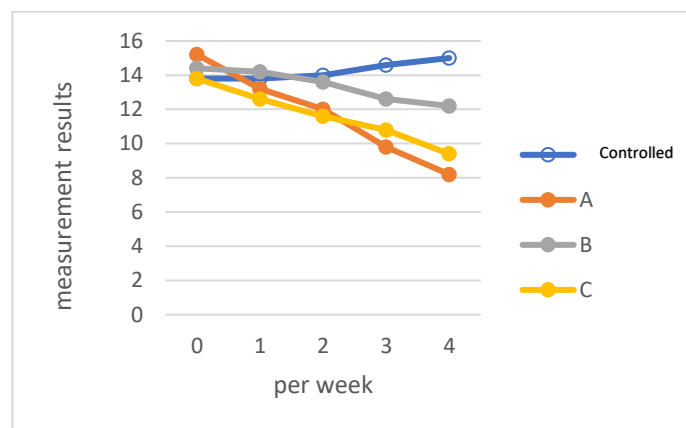


Figure 4. Wrinkle measurement results

Based on the results of measuring wrinkles in volunteers for 4 weeks, wrinkles faded with analysisist-paired before and after using moisturizer shows a significant relationship ($p \leq 0.05$) on moisturizers A, B and C.

The appearance of facial wrinkles at a young age is a sign of skin aging. Skin aging is a natural process that will occur in everyone and the symptoms become apparent with increasing age(Harris, 2019). This research has limitations since

it only tests skin moisture from Shopee's best-selling moisturizer, the data obtained is only based on the highest sales on the Shopee application without considering the composition of the moisturizer.

CONCLUSION

C. caudate leaves contribute as a refugia plant on crop fields. It is the first report on the effect of *C. caudatus* leaves extract on mortality of the black

cutworm pests, *A. ipsilon*. *C. caudatus* leaves extract significantly reduced growth of *A. ipsilon* with LC50 value of 13.29% at 72 hours. Therefore, *C. caudatus* leaves extract should be applied as a biopesticide agent. Further investigations will focus on the identification of the bioactive flavonoid compounds for antifeedants as well as pesticide activity of *C. caudatus* leaves extract.

REFERENCES

- APJII. (2018). Local Online Shop Survey. Online. <https://www.apjii.com/learn/local-online-shopsurvey/#2>,
- Aprileny, I., Rizki, D. K., & Emarawati, J. A. (2022). Pengaruh Bauran Pemasaran terhadap Loyalitas Pelanggan Melalui Kepuasan Pelanggan Sebagai Variabel Intervening. *Jurnal STEI Ekonomi*, 31(01), 37–51. <https://doi.org/10.36406/jemi.v31i01.544>
- Apriliani, H. N., & Setyawati, H. A. (2023). Pengaruh Electronic Word of Mouth, Brand Image dan Brand Trust Terhadap Keputusan Pembelian Produk Moisturizer Skintific. *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis Dan Akuntansi*, 5(3), 347–258. <https://doi.org/10.32493/jee.v5i3.28748>
- Aryani, R., Anggriani, A., Sismayati, Hartiwan, M., & Nurlela, S. (2019). Uji Efektivitas Krim Pelembab yang Mengandung Gel daun Lisah Buaya (*Aloe vera* Linn.) dan Etil Vitamin C. *Jurnal Ilmiah Farmasi Farmasyifa*, 2(1), 52–61. <https://doi.org/10.29313/jiff.v2i1.4203>
- Chrisniyanti, A., & Fah, C. T. (2022). the Impact of Social Media Marketing on Purchase Intention of Skincare Products Among Indonesian Young Adults. *Eurasian Journal of Social Sciences*, 10(2), 68–90. <https://doi.org/10.15604/ejss.2022.10.02.001>
- Ferdinand, M., & Ciptono, W. S. (2022). Indonesia's Cosmetics Industry Attractiveness, Competitiveness and Critical Success Factor Analysis. *Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management*, 15(2), 209–223. <https://doi.org/10.20473/jmtt.v15i2.37451>
- Harris, B. (2019). Pencegahan penuaan kulit dini. *Jurnal Ibnu Sina Biomedika*, 3(1), 1–8. <http://download.garuda.kemdikbud.go.id/article.php?article=1486248&val=11581&title=pencegahanpenuaankulitdini>
- Iskandar, B., Tartilla, R., Lukman, A., Leny, & Surboyo, M. D. C. (2022). Uji Aktivitas Anti-aging Mikroemulsi Minyak Nilam (*Pogostemon cablin* Benth.). *Majalah Farmasetika*, 7(1), 52–64. <https://doi.org/10.24198/mfarmasetika.v7i1.36464>
- Jayanti, R., Hafidzi, A., & Izzuddin, A. (2022). The Influence Of Information Quality, Online Customer Reviews And Postage Subsidy Promos On Purchasing Decisions On E-Commerce Shopee. <https://doi.org/10.4108/eai.10-8-2022.2320915>
- Moncrieff, G., Cork, M., Lawton, S., Kokiet, S., Daly, C., & Clark, C. (2013). Use of emollients in dry-skin conditions: Consensus statement. *Clinical and Experimental Dermatology*, 38(3), 231–238. <https://doi.org/10.1111/ced.12104>
- Prasetyo, B. E., Kaevin, A., Hasanah, F., & Laila, L. (2021). The influence of kenikir (*Cosmos caudatus* kunth) ethanol extract concentrations on peel off gel formula and its anti-aging effect. *Tropical Journal of Natural Product Research*, 5(7), 1196–1200. <https://doi.org/10.26538/tjnpr/v5i7.5>
- Timotius, E., & Octavius, G. S. (2021). Global Changing of Consumer Behavior to Retail Distribution due to Pandemic of COVID-19: A Systematic Review. *Journal of Distribution Science*, 19(11), 69–80. <https://doi.org/10.15722/jds.19.11.202111.69>
- Veronika, C., Djoko, J., & Tjahjo, W. (2021). Tingkat pengetahuan masyarakat Surabaya mengenai brand image produk Viva Queen melalui promosi di media sosial. *Jurnal E-Komunikasi*, 9(2), 1–10.
- Wagh, D. P. (2021). a Study of Consumer Behavior Towards Cosmetic Products With Reference To Lakme. *Sambodhi UGC Crae Journal*, 44(1).
- Wu, Y., & Tanaka, T. (2021). Objective and quantitative measurement of skin micro-relief by image analysis and application in age-dependent changes. *Skin Research and*

- Technology, 27(6), 1072–1080.
<https://doi.org/10.1111/srt.13060>
- Wulandari, A., & Anwar, K. (2021). Analisis Manajemen Pemasaran Pada Aplikasi Shopee Dan Tokopedia. *Transekonomika: Akuntansi, Bisnis Dan Keuangan*, 1(3), 295–301.
<https://doi.org/10.55047/transekonomika.v1i3.49>
- Yuliansari, M. (2020). Proses Pembuatan Masker Bunga Rosella Dan Tepung Beras Sebagai Pencerahan Kulit Wajah. *Jurnal Tata Rias*, 09(2), 367–376. <https://jurnalmahasiswa.unesa.ac.id/index.php/jurnal-tata-rias/article/view/34626%0A>
- Zubaidah, I., & Latief, M. J. (2022). Analisis Proses Pengambilan Keputusan Konsumen E-commerce Shopee di Lingkungan RT08/RW10 Sriamur Bekasi. *Jurnal EMT KITA*, 6(2), 324–333.
<https://doi.org/10.35870/emt.v6i2.674>