



Review on Cucumber Lotion as Skin Care Product

Kartiki U. Jadhav, Manisha Kale Mam

Department of Pharmaceutics, Dr Naikwadi College of Pharmacy Jamgaon Sinnar.

Dr. Naikwadi College of Pharmacy Jamgaon Sinnar.

Contact no 7391803804, Email id:- kartikijadhav2002@gamil.com

ABSTRACT

Since the old times, there has been mindfulness among individuals with respect to the utilization of plant for the fundamental requirement of a sound and wonderful skin. One of the plants is Cucumber. Cucumber has many vernacular names such as Cucumber sativus kakari, khita, Dosa kalla. Cucumber lotion is considered as a skin care product. Beauty or skin care products are the items used to clean skin and make skin glow. Cucumber lotion is a herbal product and ayurvedic product that doesn't harm to any type of skin. The objective of this work is to plan and assess a natural cream or lotion for corrective reasons from home-grown fixing. Cucumber lotion is a semisolid dosage form and it is a natural product with its non-poisonous nature, lessens the hypersensitive responses and reliable convenience of numerous fixings.

KEYWORD: Lotion, cream, face cream, cosmetic, herbal product, Ayurveda, face lotion, body lotion

Introduction

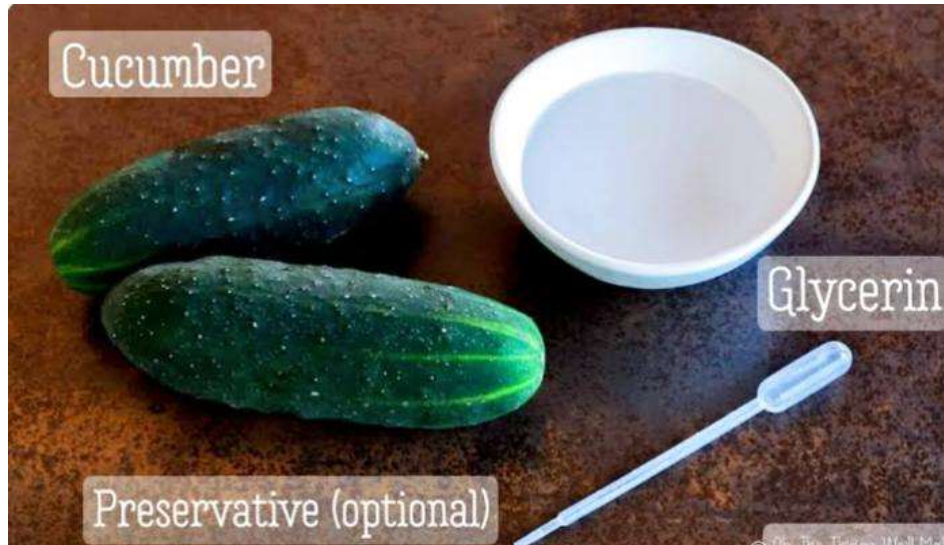
The Cucumber lotion which are referenced in Ayurveda assist ladies with disposing of kinks, dark circles, pimples, and skin break out. Home-grown Cucumber lotion increments the decency and perfection of skin. We can infer the most extreme advantages of home-grown lotion by utilizing them as indicated by our skin type. Cucumber lotion shows many pharmacological activities like skin whitening, antiwrinkle, wound healing, anticancer, antioxidant activity. Cucumber lotion used as a face cream also. Cucumber is used to give benefits on skin such as hydrate skin, reduce skin inflammation, treats sunburn, prevent acne, prevent premature aging and promotes skin brightness. Cucumber lotion is a water-in-oil type emulsion. For Cucumber lotion is made by adding some preservatives and Cucumber extract. Cucumber contains vitamin E and C and nutrients, it can also ease and soothe most types of skin irritation and both help to brighten your complexion.

Benefits of cucumber on Skin

- 1] keep pimples and acne off face
- 2] keeps the skin healthy and toned
- 3] Helps to combat signs of premature aging
- 4] A great source of hydration
- 5] Combats free radicals
- 6] Relieves fatigue and under eye bags
- 7] Helps with puffy eyes

Cucumber extract

Cucumber extract is quite simple to make and only uses two main ingredients: Cucumber and vegetable glycerin. Optionally, preserve the finished extract with a natural preservative.



Preparation of cucumber extract

1] First, prepare the Cucumber by peeling it and slicing it while you could probably extract it unpeeled, by peeling it exposing more of the flesh of the Cucumber to help speed up the process



2] Once you have sliced the Cucumber ,you can further cut it into smaller pieces that fit well into the container you plan to use for the extraction process. I used a clean glass jar (rinse jar with dishwasher or hot water it help to sanitize the jar



3] Add Cucumber pieces to the jar and cover them with vegetable glycerin. Cover the jar and set it aside for few days



4) The next morning, you should notice a difference into the way the Cucumber pieces look ,the Cucumber pieces reduce in size and lose their green color as the glycerin absorb their moisture. Over the next couple of days ,they may begin to shrivel even more.



5) Straining the extract -After few days you probably won't notice any more significant changes in the appearance of the Cucumber at this point, strain the Cucumber .



6) Strain the extract by pouring the Cucumber mixture through a sieve in a clean jar .it is helpful to weigh out the final amount of extract, you can then compare to the original amount of glycerin added to know how much Cucumber juice has been infused into the glycerin.

7] Don't press on the Cucumber to try to push out any more Cucumber juice, I allow it to drip dry and then remove the sieve with the Cucumber pieces.



8] Cucumber extract is ready.



Preparation of Cucumber Lotion (10gram)

INGREDIENTS USED IN CUCUMBER LOTION

Sr no.	Ingredients	quantity given for (100gm)	quantity taken for (10gm)
1	Bees wax	20%	2gm
2	Borax	30%	3gm
3	Cucumber extract	59%	0.59gm
4	Rose water	1	0.1gm
5	Distilled water	30	3
6	Liquid paraffin	10%	1gm

Role of ingredients in lotion

Sr no.	Ingredients	Role of Ingredients
1	Bees wax	stiffening agent in cosmetic
2	Borax	Antiseptic
3	Cucumber extract	anti moisturizing, anti purification, anti inflammatory
4	Rose water	preservative, perfume
5	Distilled water	vehicle

Apparatus used in preparation of lotion

1	Beaker
2	Measuring cylinder
3	Thermometer
4	Glass rod
5	Water bath

PROCEDURE of cucumber lotion

- 1] Take a 2 Beaker, IN first Beaker add Beeswax and liquid paraffin, melt the Bees wax at 70°C. In water bath
- 2] take another Beaker(2nd Beaker) in that add Borax and Distilled water heat it upto melt at 70°C in water bath
- 3] Measure the temperature of both beakers solution by thermometer.
- 4] cool the mixture at room temperature
- 5] Add first Beaker mixture(beeswax and liquid paraffin) drop wise in second Beaker (Borax and Distilled water) with continuously stirring.
- 6] Add Cucumber extract drop wise in mxture with continuously stirring ,stir the mixture vigorously upto getting creamy mixture
- 7] After getting creamy mixture of cucumber lotion ,transfer the lotion into clean and sterilized container.
- 8] Cucumber lotion is ready and label it.

Evaluation tests for Cucumber lotion

1] patch test:-

Choose a sensitive part of skin ,make sure the part of skin is dry and clean completely, Apply tiny amount of Cucumber lotion on that part of body and spread it then Apply bandage and wait for 24hr getting the result

2] Skin sensitivity test:

Apply the tiny amount of lotion on sensitive skin,observe the result and wait for the result.

3] PH TEST:-

The ph of prepared lotion was evaluated by ph meter analyzer at room temperature, Ph should be neutral.

4] Visual appearance:-

The appearance of lotion was evaluated by its colour pearlescence and roughness and graded

5] Stability testing:-

Place the product at 100°C for 24 hr and place it at room temperature (25°C) for 24 hrs ,it's complete one cycle repeat this 3times and stability test is done

Discussion and Conclusion

The Advantage of home grown beauty care /skin products is their non poisonous nature ,limiting the utility of specific items for hypersensitive responses and dependable use ,to further develop the flexibility of skin and dispose of toxic ingredients from the skin pores.

Regular medicines are more fitting with the view that they make less side impacts on skin. The home grown Cucumber lotion containing natural ingredients to make it natural product or healthy product for skin, we have in this manner found great properties for the Cucumber lotion in the current procedure and enjoyed to make a herbal lotion and found the gainful benefits of cucumber lotion

REFERENCE

- 1] Pritesh Shah, Swati Dhande, Dr. Yadunath Joshi, Dr. Vilasrao Kayam. A review on *Cucumis sativus*, Research Journal of Pharmacognosy (2013)
- 2] Vishvam Kindergarten, Sneha Sonawane, Akshay Katkale and Siddhant Hagavane, Review on lotion as skin care products, World Journal of Pharmacy and Pharmaceutical Science, 503-519 (2022)
- 3] Trivedi PC. Herbal drugs and biotechnology. Pointer publications; pp.1
- 4] Siddiqui HH. Safety of herbal drugs: An overview. Drugs News and Views 1993; 1(2): pp.7-10
- 5] Kasture PV, Gokhale SB, Parakh SR, Paradkar AR. Pharmacists-II, Nirali Prakashan, Fifth Edition, 2001; 96-100.
- 6] Khar R.K, Vyas.S.P, Ahamad. F.J, Jain.G.K. The Theory and Practice of Industrial Pharmacy. CBS Publication, Fourth Edition, 2013; 652.
- 7] Kanihakis, J. Anatomy, histology and immunohistochemistry of normal human skin. European Journal of Dermatology, 2002; 12(4): 390-401.
- 8] James, W.D., Berger, T.G., & Elston, D.M. Andrews' diseases of the skin: Clinical dermatology (10th edition.). Philadelphia: Elsevier Saunders, 2006.
- 9] Ross and Wilson. Anatomy and Physiology in Health and Illness, 11th ed.
- 10] Young, Barbara. Wheater's functional histology: a text and colour atlas. Elsevier, 2014; 160 & 175.
- 11] Murphy, G.F. Histology of the skin. In D. Elder, R. Elenitsas, C. Jaworsky, & B. Johnson, Jr. (Eds.), Lever's histopathology of the skin (8th ed., pp. 5-45). Philadelphia: Lippincott Williams & Wilkins, 1997.
- 12] Chu, D.H. Overview of biology, development, and structure of skin. In K. Wolff, L.A. Goldsmith, S.I. Katz, B.A. Gilchrist, A.S. Paller, & D.J. Leffell (Eds.), Fitzpatrick's dermatology in general medicine (7th ed., pp. 57-73). New York: McGraw-Hill. Cotsarelis, G., Sun, T.T., & Lavker, R.M., (1990). Label-retaining cells reside in the bulge of the pilosebaceous unit: Implications for follicular stem cells, hair cycle, and skin carcinogenesis. Cell, 2008; 61(7): 1329-1337.
- 13] James, William; Berger, Timothy; Elston, Dirk. Andrews' Diseases of the Skin: Clinical Dermatology (10th Ed.). Saunders, 2005; 1: 11-12.
- 14] Marks, James G; Miller, Jeffery. Lookingbill and Marks' Principles of Dermatology (4th Ed.). Elsevier Inc., 2006; 8-9.
- 15] Hicklin, R. Austin. "Anatomy of Friction Ridge Skin". Encyclopedia of Biometrics. Springer US, 2009; 23-28.
- 16] Malvi (4 March). "The Ageing Skin - Part 1 - Structure of Skin and Introduction -Articles". PharmaXChange.info., 2011.
- 17] Lin, Chang-min; et al. (October). "Microencapsulated human hair dermal papilla cells: a substitute for dermal papilla? Archives of Dermatological Research. Springer, 2008; 300(9): 531-535.
- 18] Mosby's Medical, Nursing & Allied Health Dictionary (4th Ed). St. Louis: Mosby, 1994;
- 19] Gogte VM. Ayurvedic Pharmacology and Therapeutic Uses of Medicinal Plants. Mumbai: Chaukhamba Publisher; 2000. p.663
- 20] Kumar D et al. Free radical scavenging and analgesic activities of *Cucumis Sativus* L. Fruit extract. Journal of Young Pharmacist. 2(4); 2010: 365-368.
- 21] Michelle AB et al. Discovery of JSI-124 (cucurbitacin-1), a selective janus kinase/signal transducer and activator of transcription 3 signaling pathway inhibitor with potent antitumor activity against human and murine cancer in mice. Cancer Research. 63(6); 2003: 1270-1279.
- 22] Chen JC et al. Cucurbitacins and Cucurbitane glycosides: structure and biological activities. Natural Products Report. 22(3); 2005: 386-399.
- 23] Daisy MSY et al. Cucurbitin-1 elicits anoikis sensitization, inhibits cellular invasion and in-vivo tumor formation ability of nasopharyngeal carcinoma cells. Carcinogenesis. 30(12); 2009: 2085-2094.
- 24] Kai H, Baba M, Okuyama T. Inhibitory effect of *Cucumis Sativus* on melanin production in melanoma B16 cells by down regulation of tyrosinase expression. Planta Medica. 74(15); 2008: 1785-1788.
- 25] Nema NK et al. *Cucumis sativus* fruit potential antioxidant, anti-hyaluronidase and anti-elastase agent. Archives Dermatological Research. 303(4); 2011: 247-252.
- 26] Roman-Ramos R, Flores-Saenz JL, Alarcon-Aguilar FJ. Anti-hyperglycemic effect of some edible plants. Journal of Ethnopharmacology. 48(1); 1995: 25-32.

-
- 27] E-Hernandez G et al. Studies on hypoglycemic activity of mexican plants. Proc. West. Pharmacol Soc. 45; 2002: 118-124.
- 28] Stano J et al. Demonstration of activity of α galactosidase secreted by Cucumis sativus cells. Acta Biotechnologica. 21(1); 2001: 83-87.
- 29] Elisha EE et al. The anthelmintic activity of some Iraqi plants of Cucurbitaceae. Pharmaceutical Biology. 23(3); 1987: 153-157.
- 30] Khawola AF and Khuthur DS. Antimicrobial activity of amine fraction of Cucumber (Cucumis Sativus) extract. Mircen Journal of Applied Microbiology and Biotechnology. 3(3); 1987: 275-279.
- 31] Gill NS et al. Evaluation of antioxidant and antiulcer potential of Cucumis sativus seeds extract in rats. Asian Journal Clinical Nutrition. 1; 2009: 131-138.
- 32] Sudheesh S, Vijaylakshmi NR. Lipid lowering action of pectin from Cucumis sativus. Food Chemistry. 67(3): 1999: 281-286.
- 33] Patil MK, Kandhare AD, Bhise SD. Pharmacological evaluation of ameliorative effect of aqueous extract of Cucumis sativus L. fruit formulation on wound healing in Wistar rats. Chronicles of Young Scientists. 2; 2011: 207-213.
- 34] LU GI, Yuan WX, Fan YJ. Clinical and experimental study of tablet cucumber vine compound in treating essential hypertension (Article in Chinese). Zhong Xi Yi Jie He Za Zhi. 11(5); 1991:
- 35] Fischer, Josef E.; Bland, Kirby I.; Callery, Mark P. (18 December). Mastery of Surgery. Lippincott Williams & Wilkins, 2006; 482.
- 36] Chauhan lalita, Gupta shalini et al, Journal of Drug Delivery and Therapeutics, 2020; 10[5-s]: 281-289.
- 37] Mehta RM, Pharmaceutics-I, Vallabh Prakashan, 2000; 13: 17.
- 38]. Kasture PV, Gokhale SB, Parakh SR, Paradkar AR, Pharmacists-II, Nirali Prakashan, Fifth Edition, 2001; 96-100. 3. Mehta RM, Pharmaceutics-I, Vallabh Prakashan, 2000; 13: 17.
- 39] Nanda S, Nanda K, Khar RK, cosmetic technology, Birla publication, 2015; 275.
- 40] Pawar PA, Gaud RS, Modern dispensing pharmacy, Career Publications. Third edition, 2009; 25-27, 184-185, 214-216.