International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

The Way of Traditional Skincare: Formulation of Cleansing Spray Using Indian Spices

Phalguni Surwade[1], HOD Dr. Rajeshree Saoji[2], Prof. Dr. Vibha Kapoor[3]

[1,2,3]The student of Beauty Cosmetology, School Of Design, Sandip University, Mahiravani, Nashik

Abstract:
Recently cleansing spray has gained a lot of focus towards it as it is convenient and effective on the skin. This formulation mainly focuses on Indian spices i.e. Cinnamon (cinnamomum verum), Cumin (cuminum cynimum), Fennel (foeniculum vulgare) and Licorice (glycyrrhiza glabra). These are commonly known for its anti-oxidant, anti-microbial and anti-inflammatory properties from the medieval period which makes them workable for skincare. The study focuses on formulation techniques, evaluation of physiochemical properties, extraction of bioactives, and stability and efficacy of skin cleansing. Which also helps in skin improvements. As per the Results, this formula helps in removing impurities from the skin, provides soothing effect and in addition it also balances skin's sebum production. This research focuses on the potential spice-based skincare products as it has natural and sustainable properties which provides a better alternative to chemical based cleanser.

INTRODUCTION

Cleansing of the skin is very essential. Skin cleansers are widely used for the cleaning purpose. Spray cleanser are convenient and effective. Many face cleansers consists of synthetic chemicals which may sometimes lead to allergic reactions.

Various types of Indian spices are proven effective in providing skin improvements such as brightening, soothing, anti-acne properties etc.

The focal point of this study is to improve and develop natural spray cleanser using four key Indian spices i.e.

cinnamon (cinnamomum verum), cumin (cuminum cynimum), fennel (foeniculum vulgare) and licorice (glycyrrhiza glabra).

These are known for its anti-microbial, anti-inflammatory, and anti-oxidant properties.

1. Cinnamun (cinnamun verum) -

Cinnamum verum commonly known as cinnamon has significant application in cosmetics. It is used widely for it benefial properties such as it is anti-microbial, anti-oxidant, anti-inflammatory etc.

cinnamon is derived from the inner bark of the cinnamon tree, its eesential oil and extracts are incorporated into various skincare and personal care products.

Benefits of cinnamon in skin cosmetics.

- **Anti-microbial property:**

Cinnamon contains cinnamaldehyde and eugenol, it fight against acne causing bacteria.

- **Anti-oxidant protection:**

Cinnamon is rich in polyphenols, which acts as a anti-aging agent. Such as reducing wrinkles and fine lines.

- **Anti-inflammatory:**

It has properties which helps reduce inflammation on the skin. Also, it helps in reducing redness and itchiness on the skin.

Cinnamon also has skin brightening, exfoliation and detoxification properties. It has various benefits, making it a great addition to natural and herbal cosmetics formulations.

2. Cumin (cuminun cynimum)-

Cuminum cynimum commonly known as cumin, used in traditonal medicine practices. It consists of essential oils, vitamins, and anti-oxidants. It also acts anti-microbial, anti-flammatory, and removes dead skin cells by providing soft and supple skin.

Benefits of cumin in skin cosmetics.

- **Anti-microbial and Anti-acne:**

Thymol and Cuminaldehyde are present in cumin, which prevent the formation acne. As it has anti-bacterial and anti-fungal properties.

- **Anti-oxidant properties:**

It is Rich in vitamin E, cumin increases collagen production, which helps reduce wrinkles and fine lines.

- **Soothing and Anti-inflammatory:**

Helps reduce redness, irritation, and swelling, and inflammed skin.

Cumin also helps in detoxification, deep cleansing, skin brightening and provide even toned skin.

3. Fennel (foeniculum vulgare)-

Foeniculum vulgare commonly known as Fennel, is a medicinal and cooking herb. Known for its detoxifying, anti-inflammatory, and anti-aging properties.

Benefits of fennel in skin cosmetics.

- **Anti-oxidant and Anti-aging:**

Fennel is rich in vitamin C, and essential oils, which help neutralize free radicals, which reduces wrinkles and provide anti-aging properties.

- **Detoxification and deep cleansing:**

Its purifying properties help remove to impurities, making it effective for skin cosmetics.

- **Hydration and skin nourishment:**

its high in moisurising which makes it beneficial for dry and dehydrated skin.

4. Licorice (glycyrrhiza glabra)-

Glycyrrhiza glabra generally known as licorice, well-known as a medicinal herb, used in skincare as it has powerful skin brightening, anti-inflammatory, and antioxidant properties. It consists of glabridin and liquiritin, which help in treating hyperpigmentation, soothe irritation etc

Licorice benefits in skin cosmetics.

- Skin brightening and hyperpigmentation reduction:

Fennel provide skin brightening and hyperpigmentation reduction as it has glabridin present in it. It also helps in fading dark spots, acne scars etc.

- Hydration and skin barrier support:
  Licorice extract provides hydration on the skin.
- UV protection:

It also provides protection from the harmful uv rays by forming a layer on the skin.

Licorice is also used in other numerous cosmetics due to its various beneficial properties.

Firstly, licorice in powdered was purchased from an ayurvedic store and the remaining three actives i.e. cinnamon, cumin, and fennel was purchased from

2. MATERIALS AND METHODS

2.1 Extracting actives

The active ingredients were measured and were sundried for 1 day. After which it was finely grinded into fine powders, later, it went under sievinng which helped obtained smooth and uniform powder. These are then taken to the extraction process.

2.2 Extraction

For herbal powder extractions any Suitable type of solvent can be used. Here, ethanol was incorporated with the powder of actives for better stability and easy evaporation.

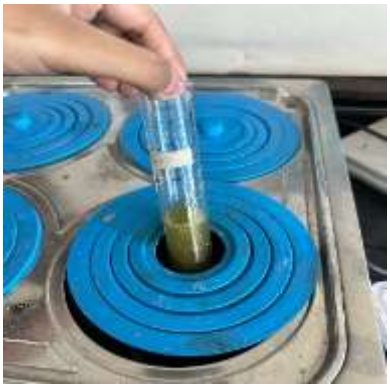

Fig 1: Extracting of cinnamon

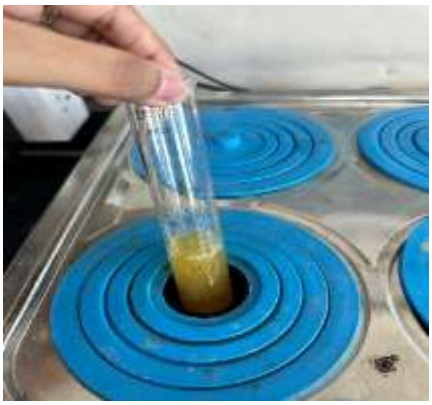

Fig 2: Extracting of cumin

2.3 Preparation Method

The powdered actives are extracted by hot infusion method. The ratio of the extraction is 2:18 (2g of powder and 18g of ethanol as solvent). Four testubes are placed into the water bath for 1 hour and the temperature should not exceed 70°C. The four extraction are seived with the help of filter paper and preservatives are added to them after it has cooled down. These four extracted actives are then kept for 1-2 days for stability testing.

Fig 3: Extraction of fennel and licorice

Fig 4: Filteration of extracts

2.4 Other Excipient

2.4.1 Glycerin

Glycerin is a widely used humectant. It provides moisturising emollient properties. It also has a sweet taste to it.

2.4.2 Sodium Acetate

Sodium Acetate is a buffering agent which helps in stabilizing the pH of the formulation.

2.4.3 CapB

CapB is an amphoteric surfactant which also helps in better stabilising.

2.4.4 Polysorbate 20

Polysorbate 20 is a light surfactant used in formulations.

2.4.5 Methyl Paraben and Propyl Paraben

Methyl Paraben and Propyl Paraben are preservatives which help in preservation and increasing shelf life by preventing microbial growth. It can also be used in cosmetics and food item too.

3.FORMULATION

3.1 Formulation procedure

Phase A

Add preservative in accurately weighed water. Heat it until the preservatives are dissolved in it. Bring water to room temperature. Add sodium acetate and glycerin in the water. Mix well.

Phase B

Mix galaxy CadB and polysorbate 20 in a separate beaker. Slowly add Phase A stirring gently avoid foam.

Phase C

Now slowly add botanical extract. Mix well avoiding foam. Test pH. Transfer into a clean and aerosol spray bottle. Label appropriately.

Fig 4: Final Product

4. APPLICATION PROCEDURE

Shake the bottle well. Spray the face cleanser onto a cotton pad. Now wipe the face with the cotton pad. Also wipe below the chin area as well.

5. CONCLUSION

Indian spice based spray face cleanser was formulated successfully. This cleanser helps in cleansing the skin and also has various beneficial properties I.e. anti-bacterial, anti-oxidant, anti-inflammatory etc. It also helps in good cleansing of the skin. It is easy to use. It is also very convenient to carry around.

References

1. Dwi Atmanto, (2019), “Influence of the Addition of the Essential Oil of Cinnamon (Cinnamomum burmanii) in Soap Against Skin Care” in 3rd UNJ International Conference on Technical and Vocational Education and Training 2018, KnE Social Science, pages 587–595. DOI 10.18502/kss.v3i12.4129
2. Kumar, Ravendra, et al. (2012). A Review on the Vanillin Derivatives Showing Various Biological Activities. International Journal of PharmTech Research CODEN (USA),Vol. 4, No. 1, pp. 266-279, Jan-Mar 2012.
3. Bhatt J, Kumar S, Patel S, Solanki R. Sequence-related am-plied polymorphism (SRAP) markers based genetic diversityanalysis of cumin genotypes. Annals of Agrarian Science.2017;15(4):434–438
4. Kanani P, Shukla YM, Modi AR, Subhash N, Kumar S. Stan-dardization of an encient protocol for isolation of RNA fromCuminum cyminum. Journal of King Saud University - Sci-ence. 2019;31(4):1202–1207
5. Soltani E, Mortazavian SMM, et al. Non-deep simple mor-phophysiological dormancy in seeds of Cuminum cyminumL. Journal of Applied Research on Medicinal and AromaticPlants. 2019;15:100222
6. Akhtar N, Khan BA, Mahmood T, Parveen R, Qayyum M, Zaman S, FarooqM (2010b) Formulation and evaluation of antisebum secretion effects seabuckthorn w/o emulsion.: J. Pharm. Biol. Sci 2: 13–n

7. Hiroshi I, ToshihikoK, Hirioaki T, Keinji S, Hidetomo S, Masahiro F (2008)Combined effect of sodium chondroitin sodium hyaluronate on skin mois-turization following single and repeated application. Asian J Pharm Sci3: 94–101.
8. Cheng, M.; Zhang, J.; Yang, L.; Shen, S.; Li, P.; Yao, S.; Qu, H.; Li, J.; Yao, C.; Wei, W.; et al. Recent advances in chemical analysis oflicorice (Gan-Cao). Fitoterapia 2021,149, 104803.
9. Kirmizibekmez, H.; Uysal, G.B.; Masullo, M.; Demirci, F.; Bagci, Y.; Kan, Y.; Piacente, S. Prenylated polyphenolic compounds fromGlycyrrhiza iconica and their antimicrobial and antioxidant activities. Fitoterapia 2015,103, 289–293.
10. Husain, I.; Bala, K.; Khan, I.A.; Khan, S.I. A review on phytochemicals, pharmacological activities, drug interactions, andassociated toxicities of licorice (Glycyrrhiza sp.). Food Front. 2021,2, 449–485
11. Akhila A.K, Nigam M.C. 1984. Gas Chromatography-Mass Spectroscopy Analysis of the Essential Oil of Pogostemon cablin (Patchouli oil). Fitotherapia. 55: 363–365.
12. Bourgou S., Pichette A., Marzouk B., Legault J. 2010. Bioactivities of black cumin essential oil and its main terpenes from Tunisia. South African Journal of Botany. 76(2): 210-216.
13. 13) Dhanashri Sanjay Koli* , Abhyangshree Nandkumar Mane “FORMULATION & EVALUATION OFANTI-ACNE FACE
14. WASH”WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCESSJIFImpact Factor6.041 Volume 5, Issue 6, 2001-2007
15. PK Mane, Aniket Dangare “HERBAL FACE WASH GEL OF CY NODON DACTYLON HAVING ANTIMICROBIAL, ANTIINFLAMMATORY ACTION” Pharmaceutical Resonance 3 (1), 36-43, 2020
16. Rathore SS, Saxena SN, Singh B. Potential Health Benets of Major Seed Spices, International J. Seed Spices. 2013;3(2):1-12
17. Venugopal DVR, Yarla NS, Umadevi P. Synthesis of novel piperine analogues of dipeptidylboronic acid as antimicrobial and anticancer agents, Med. Chem. 2014;4(9):606-10.