iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 **Issue:** V **Month of publication:** May 2023

DOI: https://doi.org/10.22214/ijraset.2023.51442

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 11 Issue V May 2023- Available at www.ijraset.com

Formulation and Evaluation of Peel Off Mask

Ms. Pallavi B. Jire[1], Ms. Mayuri V. Mali[2], Ms. Mayuri V. Khairnar[3], Ms. Sulbha G. Patil[4], Mrs. Amruta N. Patil[5]
[1, 2, 3, 4, 5]*Department of Pharmaceutics, P.S. G. V. P. Mandal`s College of Pharmacy, Shahada.*

Abstract: ***It is important to protect the skin because it is a highly delicate and protective covering of the body that is susceptible to environmental contamination. Applying different cosmetics made specifically for facial use, such as creams, lotion face masks, peel-off masks, can protect the facial skin. Peel-off masks are a sort of dosage form that are softly placed to the surface of the facial skin and removed after a short period of time.***
It is used as a treatment for issues relating to the facial skin, such as wrinkles, ageing, acne, and is primarily used to open pores that have become closed as a result of dust buildup. As a result of its occlusive effect, its primary function is to stimulate metabolism. In this formulation,curry leaves and nutmeg is being added as an active component. . When used as an active component in a peel-off mask, it increases the value of the peel-off mask by improving its function by absorbing dust particles and opening the blocked pores.
Keywords: Peel off, Nutmeg, curry leaf, cosmetic, antioxidant

I. INTRODUCTION

Skin ages prematurely when it should be ageing more slowly. Many internal and external variables frequently contribute to this. the skin's ageing process, which is characterised by the development of wrinkles, scales, dryness, chapping, and a dull appearance. Free radicals cause the skin to age more quickly and develop black patches more frequently.[1,2] The human body's outermost organ is the skin. The skin serves as an organ that shields internal organs from contact with foreign objects and harmful biological, physical, and chemical agents.

One Sun exposure is one of the external exposures that is bad for the skin.UV (ultraviolet) radiation from sunlight exposure can darken the skin and give the face a lifeless appearance.[3] In order to combat this, it is vital to take good care of the facial skin, which includes using face masks on a regular basis.In an effort to shield the skin from the effects of free radicals, cosmetic skin care is used. Several research have discussed the creation of anti-aging formulas, such as sheet masks [4], face masks, etc. Creams [5,6] and more. Using a peel-off mask involves spreading a thin liquid film with fingertips over the desired area of the face or body. After allowing it to dry for a while, it is taken away from the face using fingers.

As a thin plasticized film, it peels off. It is typically preferable that these masks just need a brief amount of time to dry down before being removed.

These peel-off masks typically remove skin dirt and thoroughly clean pores.[7]Antioxidant-rich peel-off gel masks are one type of cosmetic treatment that can be used to treat skin and delay the signs of ageing.Antioxidants are substances that can offset or lessen the harmful effects of oxidants in the body.[8]

Face masks are one of the skin care cosmetics that ladies typically use frequently to make their facial skin look younger and more attractive. Face mask advantages include pore-cleansing, hydrating, and nourishing facial skin.[9] Due to its ease of removal and ability to be lifted like an elastic membrane, peel-off gel masks have the advantage of being practical. As time passes, at this moment The demand for cosmetic products made with natural materials as active ingredients is rising quickly.[10] Hence, a peel-off gel mask was created in this study as a skin care product with natural active ingredients, specifically a combination of curry leaves and nut meg.Research on medicinal plants has been conducted as an alternative to antibiotics as a means of treating disease [11].The tropical tree Murraya koeinigii, which is a member of the Rutaceae family, has long been utilised in Indian cooking because its leaves characteristics that are hypoglycemic[12] and antibacterial[13]. Curry leaves have been studied for their several phytoconstituents, including the mahanine alkaloid and the carbazole alkaloid[14].

The evergreen nutmeg tree, Myristica fragrans, is a member of the Myristicaceae family of flowering plants that is native to Asia, Africa, the Pacific islands, and America [15] and is well-known to the majority of taxonomists.

Due to its well-known member, Myristica fragrans, the source of the spices nutmeg and mace, it is occasionally referred to as the “nutmeg family.”

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 11 Issue V May 2023- Available at www.ijraset.com

II. HERBAL INGREDIENT USED IN PEEL OFF MASK

A. Curry Leaves



Fig.1 Murraya koenigii

Curry leaves (Murraya koenigii) are a well-known leaf spice that are used in very small amounts for their distinctive aroma because they contain volatile oil and can enhance flavour.Digestion. In Asian cuisines, these leaves are frequently used to flavour meals. The leaves' flavour and other characteristics are retained even after drying; they have a little aromatic, bitter, and acidic taste. In several ancient cultures, including Indian Ayurvedic and Unani prescriptions, curry leaf is also employed.[16] The Murraya koenigii plant produces leaves that are rich In minerals, vitamins, carotene, nicotinic acid, vitamins C and A, calcium, and oxalic acid. As well as Includes carbazole alkaloids, crystalline glycosides, iso-mahanimbin, koenigin, girinimbin, koenine, koenidine, and koenimbine. The leaves also contain the triterpenoid alkaloids cyclomahanimbine and tetrahydromahanimbine. Murraya koenigii leaves have been used to isolate several compounds, including murrayaline, pyrayafoline carbazole alkaloids, and murrayastine [17] Murraya Koenigii is sometimes referred to as Meethi neem or Curry Leaf/Kari pataa. It is a Member of the Rutaceae family.[18] The plant is indigenous to India, Sri Lanka as well as a few More nations [19] It is extensively available and grown in India, as well as in Assam, Bengal, the Himalayas, Uttarakhand, the Indian state of Thiru-Kochi, and other places like the western naGhats, Asian moist forests, Bhutan, Nepal, Thailand, Pakistan, etc [18.20]. The plant has a pleasant Scent. It has a tiny shrub or a plant with a height of up to 6 metre's [21,22] Curry leaves include a variety of chemical components that have a variety of pharmacological And biological activities, nutritional benefits, and fragrant qualities. Some chemical components Include caryophyllene, element, phallendence, and others because they give plants the capacity To stop food from going bad. Other substances include m-Cymene, -Terpinene, -Myrcene, Camphene, cis ocimene, cis-Piperitol, Linalool, Terpinene, and Terpinyl acetate. Thujene, Eucalyptus oil, and caryophyllene oxide Additionally, the plant contains abundant amounts of Girinimbiol and girinimbine (carbazole alkaloids), koenine, koenigine, and koenidine, as well as Calcium, phosphorus, iron, thiamine (vitamin B1), riboflavin (vitamin B2), niacin (nicotinic Acid), sitosterol, carotene, 1,4-methanoazulen [20,23,24]

Biological source

The name of the species honours botanist Johann König. The Murray genus honours Johann Andreas Murray, a Swedish physician and botanist who passed away in 1791. Murraya koenigii Is the curry leaves' biological name as a result [25]

Category	Botanical description
Kingdom	Plantae
Subkingdom	Tracheobionta (vascular plant)
Superdivision	Spermatophyta (seed plant)
Division	Magnoliophyta (flowering plant)
Class	Magnoliospida
Subclass	Rosidae
Order	Sapindales
Family	Rutaceae
Genes	Murraya
Species	Murraya Koenigii

Chemical constituents of Murraya Koenigii

The plant extract made from Murraya koenigii contains a variety of organic compounds with Different chemical compositions, including alkaloids, flavonoids, carbohydrates, and sterol.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

These Compounds can be found in petroleum ether, ethyl acetate,chloroform, ethanol, and water. [26,28,29,30,31] The principal chemical components are described. Numerous assays were carried out To validate the presence of phyto-constituents in the plant extract, including:

1) The presence of alkaloids was confirmed by using Mayer's reagent, which shows formation Of white or cream colored precipitates in the extract of Murraya koenigii.
2) Phenolic compounds were confirmed by formation of white precipitate by the addition of Few drops of 5% lead acetate solution to alcoholic extracts of Murraya koenigii.
3) The presence of flavonoids is detected by Yellow coloration of filter paper by dipping in Ammoniated alcoholic upon the extract.
4) Presence of Saponins is considered when the extract showed honey comb like frothing Formation after giving a shake with sodium bicarbonate.
5) The presence of proteins and free amino acids is indicated by the conducting the following Tests i.e., Millons, Biurets and Ninhydrins test.
6) Presence of sterol and triterpenes are indicated by alcoholic extract which was shaken with Chloroform and few drops of acetic anhydride along with few drops of concentrated Sulphuric acid from the side of the tube form the blue to brick red coloration,[27]
7) The essential oil composition of Murraya koenigii was studied and then presence of D-Sabinene, D-a-Terpinol, di-a-phellendrene, D-a-pinene, caryophyllene and[32] the property of Murraya Koenigii oil is explained

B. Leaves

Fresh Murraya koenigii leaves include between 61.77 and 66.2% moisture, 2.1-12.5% protein, 14.6-18.97% total sugar, 9.7-13.06% total ash, 1.35 and 1.82% acid insoluble ash, 1.35 and 1.82% Alcohol soluble extractive, and 27.33 and 33.45% water extractive value.[33]

It explains the Nutritional value. Alkaloids, flavonoids, and sterols have been extracted using solvents such as Ethyl acetate, ethanol, petroleum ether, water, and chloroform during the manufacture of the Extract. Koenigine, koenine, koenidine, and (-) mahanine were extracted from leaf extracts using Acetone,[35] Mahanimbine, isomahanimbine, koenimbidine, and murrayacine were separated from The hexane,[34] It was discovered isomahanimbicine in petroleum ether [35]

Useful for skin pigmentation

Sun protection factor (SPF) is a feature of cream derived from murraya koenigii plant leaves that is great for shielding skin from sunburn. Fighting skin pigmentation is erythema. (skin redness). In order to improve or boost the efficacy of the end product, the cosmetic industry also uses this plant to formulate products like cream, lotion, and soap. [36]

Uses as antimicrobial agent

Escherichia coli, Salmonella typhi, Staphylococcus aureus, a strain of Candida albicans, Trichophyton rubrum, and Aspergillus niger are among the microorganisms that the root extract of Murraya Koenigii with hexane, methanol, and chloroform extract is tested against.It has been discovered that the root extract of this plant exhibits antibacterial action when dissolved in hexane, methanol, and chloroform.

The study also showed that this plant's root's methanol extract was superior to other extract chemicals in its ability to suppress bacteria like Staphylococcus aureus and Trichophyton rubrum. Another investigation has shown that the aqueous root extract of this plant is ineffective against bacteria.[37]

C. Nutmeg

Most taxonomists are familiar with the evergreen nutmeg tree (Myristica fragrans), which is a member of the Myristicaceae family of flowering plants that are native to Asia, Africa, the Pacific islands, and America [38]. Due to its well-known member, Myristica fragrans, the source of the spices nutmeg and mace, it is occasionally referred to as the “nutmeg family.” About 150 species of the genus Myristica can be found in Asia and the western Pacific. Due to insufficient blossoms of both sexes on one tree, nutmeg cross pollinates. There are numerous names for Myristica fragrans throughout the world. Jaiphal is the name for it in Hindi-speaking India, while Pala is the name for it in Indonesia. In Arabic, it is referred to as Josat at-Tib. It is known as jaifal in Urdu.It is referred to as muscade in French and moschokarido in Greek. It is referred to as roudoukou in Chinese. Myristica fragrans is the most lucrative species in the Myristica genus. In addition to M. fragrans, many other species of Myristica, such as M. malabarica (Indian), M. argentea, and M. fatua, are grown throughout the tropical areas.



Fig. 2 Nutmeg

Although they resemble M. fragrans in appearance, they are less expensive and have a milder flavour and aroma. Nutmeg has been reported to have aphrodisiac, stomachic, carminative, tonic, nervous stimulant, aromatic, narcotic, astringent, hypolipidemic, antithrombotic, antifungal, antidysentric, and anti-inflammatory [39] properties. It is said to be antihelminthic and is also used against skin diseases such as eczema and scabies.

Pharmacological uses

1.Anti-inflammatory activity Nutmeg's oil and anti-inflammatory properties have been noted by several authors [40]. Nutmeg oil exhibits pharmacological actions that are comparable to those of non-steroidal anti-inflammatory medications [41].

However only petroleum ether extracts have been found to have anti-inflammatory action. An AMP-activated enzyme was activated by the nutmeg extract in its whole.An therapeutic target for treating the metabolic syndrome, which includes type 2 diabetes and obesity, is the protein kinase enzyme. From this extract, seven active ingredients were identified, including tetrahydrofuroguaiacin B, 2,5-bis-aryl-3,4-dimethyltetrahydrofuranlignans, fragransin C1, saucernetindiol, nectandrin B, verrucosin, galbacin, and nectandrin A. At 5 M concentrations, some of the isolated chemicals strongly stimulated AMPK in differentiated C2C12 cells. In addition to being utilised as a treatment for type 2 diabetes, obesity, and other metabolic problems, nutmeg and its active ingredient [42].

TABLE 1 Nutmeg Products and Their Uses

Nutmeg has numerous uses and applications in food sciences; some of different products of nutmeg along with their corresponding uses are presented in Table 1 [43]

Nutmeg Product	Uses
Dried whole, ground nutmeg	Flavoring in the food industry: meat and dairy products (sausages, soups, spice mixes, baked products, eggnog, ice cream etc.), both domestic and industrial use
Nutmeg oil	Flavoring of processed foods and beverages
Mace: dried, whole, ground	Domestic and industrial culinary uses as flavorings for sweet foods, cakes, doughnuts, dairy products, and cigarettes
Mace oil	Flavorings in processed foods and baked products; extract used in perfumes, scented soaps, denture creams, and chewing gum

One of the most well-liked spices, nutmeg has long been valued for its fragrant, aphrodisiac, and medicinal qualities. Nutritionally, nutmeg is a rich source of dietary fibre, protein, carbs, and energy. In addition to being high in electrolytes (sodium and potassium), minerals (magnesium, calcium, copper, iron, zinc, manganese, and phosphorus), and phytonutrients like carotene-B and crypo-xanthin B, it is primarily rich in vitamins A, C, and E [44] The essential oil of nutmeg has been utilised in the cosmetic industry as a perfume and a natural flavouring extract due to its scent. In order to avoid leaving particles in dishes and beverages, ground nutmeg has been replaced with the oil as a flavouring agentIn addition to being nutritionally rich and having widespread use in flavorings, current research seems to focus on the potential use of nutmeg and its essential oil as food preservatives.

Exploiting the antibacterial qualities of natural plant extracts is one of the contemporary methods for enhancing the sanitary safety of manufactured food products, since this reduces the need of artificial antimicrobial agents, which could pose a risk to human health. In this context, Eos' antibacterial qualities have long been recognised and are still the focus of several research evaluating their microbiological potential as chemical agents in the food sectors [45] Nutmeg is a potential natural preservative that can be used in the food industry in this regard

III. EXCIPIENTS USED IN PEEL OFF

A. Ethanol: [46]

1) IUPAC name: Ethanol
2) Molecular formula: C_2H_6O
3) Molecular weight: 46.07
4) Functional category: Antimicrobial preservative, disinfectant, skin penetrant, solvent.
5) Description: The term "ethanol" in the BP 2009 refers to ethanol that contains 599.5% v/v of C2H6O when used without further qualification.
6) Synonyms: Ethanolum, ethyl alcohol, ethyl hydroxide, grain alcohol, methyl carbinol.
7) Uses:Disinfectant,Solvent in film coating Variable,Solvent in injectable solutions Variables ,Solvent in oral liquids Variable,Solvent in topical products Antimicrobial preservative

B. Gelatine: [46]

1) Chemical name: Gelatin
2) Molecular formula:$C_{102}H_{151}N_{31}O_{39}$
3) Molecular weight: 20 000–200 000
4) Functional category: Coating agent; film-forming agent; gelling agent; suspending agent;tablet binder; viscosity-increasing agent.
5) Description:Gelatin is a vitreous, brittle solid that ranges in colour from light amber to barely yellow.
6) Synonyms: gelatina, gelatin
7) Uses:Although anaphylactoid reactions have been documented with the latter use, gelatin has been utilised to prepare wound dressings and as a plasma substitute.

C. Polyvinyl Alcohol: [46]

1) Chemical name: homopolymer
2) IUPAC name: Poly(Vinyl Alcohol)
3) Molecular formula:$(C_2H_4O)_n$
4) Molecular weight: 20 000–200 000
5) Functional category: Coating agent, lubricant, stabilizing agent, viscosity-increasing agent.
6) Description:Polyvinyl alcohol occurs as an odorless, white to cream-colored granular powder.
7) Synonyms: Polyvinol, PVA, vinyl alcohol polymer.
8) Uses:Emulsions ,Ophthalmic formulations,Topical lotions

D. Glycerine: [46]

1) Chemical name: Glycerol
2) IUPAC name: Propane-1,2,3-triol
3) Molecular formula: $C_3H_8O_3$
4) Molecular weight: 92.09
5) Functional category: Antimicrobial preservative; cosolvent; emollient; humectant; plasticizer; solvent; sweetening agent; tonicity agent
6) Description: Glycerin is a clear, colorless, odorless, viscous, hygroscopic liquid; it has a sweet taste, approximately 0.6 times as sweet as sucrose.
7) Synonyms: glicerol, glycerine, glycerolum, Optim, Pricerine, 1,2,3-propanetriol, trihydroxypropane glycerol.
8) Uses:Antimicrobial preservative ,Emollient,Gel vehicle, aqueous ,Humectant, Ophthalmic formulations

E. Water: [46]

1) Chemical name: water
2) Molecular formula:H_2O
3) Molecular weight:18.02
4) Functional category: Solvent.
5) Description: The term 'water' is used to describe potable water that is freshly drawn direct from the public supply and is suitable for drinking.
6) Synonyms: Aqua, aqua purificata, hydrogen oxide.
7) Uses: Water is widely used as a raw material, ingredient and solvent in the processing, formulation and manufacture of pharmaceutical products, active pharmaceutical ingredients (API) and intermediates, and analytical reagents. Specific grades of water are used for particular applications in concentrations up to 100%

IV. MATERIAL AND METHOD

Sr. No.	Material	Supplier	Category
1.	Curry leaf	Local market	Antioxidant
2.	Nutmeg	Local market	Antioxidant
3.	Ethanol	PSGVPMs College of Pharmacy, Shahada	Preservative
4.	Gelatine powder	PSGVPMs College of Pharmacy, Shahada	Gelling agent
5.	Polyvinyl alcohol	PSGVPMs College of Pharmacy, Shahada	Binder
6.	Glycerine	PSGVPMs College of Pharmacy, Shahada	Lubricant, humectants
7.	Diethylene glycol	PSGVPMs College of Pharmacy, Shahada	Emulsifiers
8.	Water	PSGVPMs College of Pharmacy, Shahada	Vehicle

V. FORMULATION FOR PEEL OFF MASK

Sr. No.	Ingredients	Formulation 1 Qts. (10g)	Formulation 2 Qts. (10g)	Formulation 3 Qts. (10g)
1.	Curry leaf	2.8ml	2.9ml	3 ml
2.	Nutmeg	0.8ml	0.8ml	1ml
3.	Ethanol	0.8ml	1ml	1.2ml
4.	Gelatine powder	2gm	2.2gm	2.4gm
5.	Polyvinyl alcohol	1.5gm	1.6gm	1.75gm
6.	Glycerine	1 ml	1.5ml	2ml
7.	Diethylene glycol	0.4ml	0.4ml	0.6ml
8.	Water	10ml	10ml	10 l

A. Method

Peel off mask is done by Cold Process. It helps to stop any evaporation that may happen by heating.Take 10 ml of water in beaker and start stirring with magnetic stirrer.Add ethanol as preservative. In this ethanol is act as self reserving.add the Polyvinyl alcohol into the formula so we mix and stir this until it looks evenly dispersed (at this stage it won't be fully hydrated or dissolved but it should be evenly disbursed)Add glycerine and diethylene glycol made slurry of this and Add this to PVA mixture.It starts to get very thick so little bit more stirring.Now, this is kept for 24 hrs. and after 24 hrs. stir again until gel becomes clear.

B. Extraction Method Of Curry Leaf

10gm of curry leaf powder were dissolved in 100 ml of ethanol and distilled water (8:2 w/v) to Create the ethanol extract. With filter paper kept for 24 hours at room temperature and in a dark Place. For the experiment's final volume of curry leaf ethanol extract, the filtered supernatant was Collected, and the solvent was evaporated by incubation at room temperature for 48 hours

Extraction method of Nut meg:

The maceration procedure was used to extract the dried nutmeg seeds powder for three days at room temperature. Nutmeg powder to solvent was extracted in a 1:4 (w/v) ratio, and the mixture was then filtered and concentrated under vacuum using a rotatory evaporator at 40 °C. [47]

VI. EVALUATION PARAMETER

The prepared face mask peel off for Organoleptic property, pH , thickness measurement , spreadability [48]

1) Organoleptic property

a) colour_the mask is orange in colour

b) Odour _ It is odourless which last long even the face with water.

c) Consistency : It is smooth and light to spread.

2) Thickness measurement_Thickness of the film was measured at different Points using digimaticvernier caliper. The average of 3 readings was taken as 0.18mm.

3) pH_The pH value of topical peel off gel was determined by using digital pH meter. One gram of gel was dissolved in 100 ml distilled water and stored for two Hours. The measurements of pH of the formulation were done in triplicate and average value was found To be 7.5

4) Skin Irritation Study_The formulated peel off should not produce any skin irritation or skin sensitization, after its application on The skin or else it will be unsuitable for application on To the skin. Hence the peel off face mask formulation was subjected to skin irritation study using Draize modified scoring technique.The score was found to be 0.0. Thus the formulation was found to non-irritant.

5) Spreadability

Spreadability of the peel-off gel was found to be 1.9±0.4 cm respectively.

Parameters	Spread ability	Weight (g)	Length (cm)	Time (sec
Placebo Peel- off Gel	1.9	1	2.5	11

VII. RESULT

Sr .no	Parameters	Formulation _1	Formulation _2	Formulation _3
1	Colour	Orange	Orange	Orange
2	Odour	Odourless	Odourless	Odourless
3	Consistency	Smooth and light	Smooth and light	Smooth and light
4	Thickness	0.18mm	0.18mm	0.18mm
5	pH	7.5	7.5	7.5
6	Skin Irritation	No	No	No
7	Spreadability	11sec	11sec	11sec

VIII. CONCLUSION

The formulating peel off face Mask was with good results. The Peel off mask showed a good spreadability. The Formulation showed a good peel off property on skin without causing skin irritation or edema. Several evaluation parameters were used to test the peel off mask, and it was found to be suitable for use on the skin to support health and brightness without having any side effects. The study also revealed that the formulation is capable of enlarging the pores and enhancing the cleansing of the skin by removing dead skin on the Surface. The skin pores were also observed to be retaining their normal size after the Treatment; thus retaining the moisture and nutrients within the skin. The formulation was subjected to Stability and thermodynamic stability studies. The study revealed that the formulation is capable of enlarging the pores and enhancing the cleansing of the skin by removing dead skin on the surface.

REFERENCES

[1] Foos, P. W., & Clark, M. C. 2016. Human aging. Routledge.

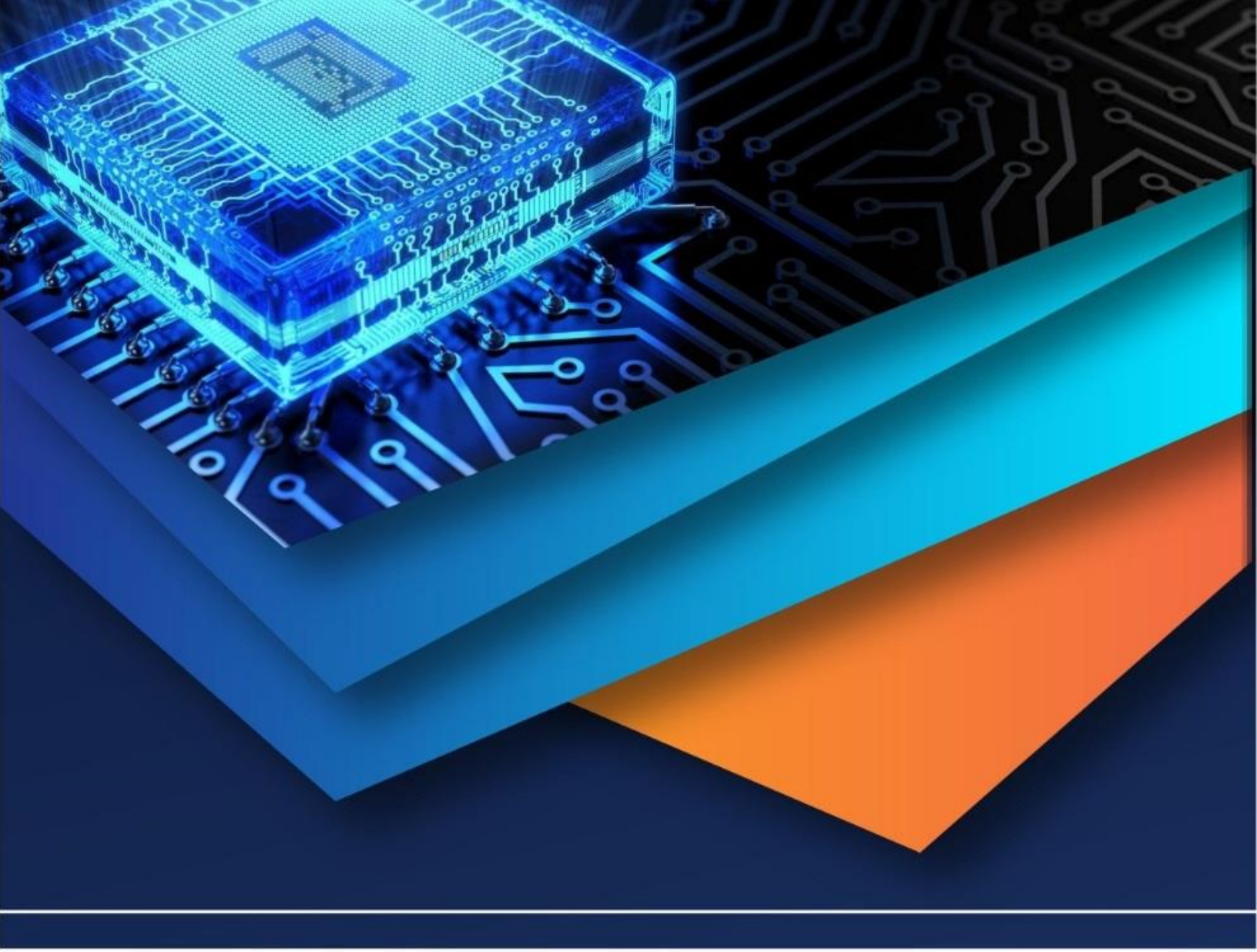
[2] Phaniendra, A., Jestadi, D. B., & Periyasamy, L. 2015. Free radicals: properties, sources, targets, and their implication in various diseases. Indian Journal of Clinical Biochemistry, 30(1), 11-26.

[3] Sari AN. Alternative antioxidants to ward off the dangers of free radicals On the skin. Journal of Islamic Scienc and Technology. 2015;1(1):63–68

[4] Reveny, J., Surjanto, J. T., & Lois, C. Formulation of Aloe Juice (Aloe vera (L) Burm. F.) Sheet Mask as Anti-Aging. 2016., International Journal of PharmTech Research, 9(7), 105-111.
[5] Paithankar, V.V. 2010. Formulation and evaluation of herbal cosmetic preparation using safed musli. International Journal of PharmTech Research, 2(4), 2261-2264
[6] Suhery, W. N., Fernando, A., & Has, N. 2016. Uji aktivitas antioksidan dari ekstrak bekatul padi ketan Merah dan hitam (Oryza sativa L. var. glutinosa) dan formulasinya dalam sediaan krim. Pharmacy 13(1).
[7] Jadoon, S., Karim, S., Asad, M. H. H. B., Akram, M. R., Kalsoom Khan, A., Malik, A., & Murtaza, G. 2015. Anti-aging potential of phytoextract loaded-pharmaceutical creams for human skin cell Longetivity. Oxidative medicine and cellular longevity.
[8] 8. Reshmi, S. K., Aravinthan, K. M., & Suganya, D. P. 2012. Antioxidant analysis of betacyanin extracted From Basella alba fruit., International Journal of PharmTech Research, 4(3), 900-913
[9] Sumiyati Mandike SG. Peel off Gel Mask Formulation from Kepok Banana Peel (Musa paradisiaca L.). Jurnal Dunia Farmasi. 2017;1(3):123–133.
[10] Anindita. Natural mask formulation made from seaweed and Chocolate reduces wrinkles and blemishes on facial skin. Jurnal Care. 2017;5(2):393–402.
[11] Nasri H, Bahmani M, Shahinfard N, Nafchi AM, Saberianpour S, Kopaei MR. Medicinal plants for the treatment of acne vulgaris: A review of recent evidences. Jundishapur J Microbiol 2015;8:11
[12] Yadav S, Vats V, Dhunnoo Y, Grover JK. Hypoglycemic and antihyperglycemic activity of Murraya koenigii leaves in diabetic rats. J Ethnopharmacol 2002;82:111–6.
[13] Shekar BC, Nagarajappa R, Jain R, Singh R, Suma S, Thakur R. Antimicrobial efficacy of acacia nilotica, murraya koenigii L. Sprengel, eucalyptus hybrid, psidium guajava extracts and their Combinations on Fusobacterium nucleatum and Porphyromonas gingivalis. Indian J Dent Res 2018;29:641–5.
[14] Samanta SK, Kandimalla R, Gogoi B, Dutta KN, Choudhury P, Deb PK, et al. Phytochemical portfolio and anticancer activity of Murraya koenigii and its primary active component, mahanine. Pharmacol Res 2018;129:227–36.
[15] S. Kitamura, P. Poonswad. (2013). Nutmeg-Vertebrate interactions in the Asia-Pacific region: Importance of frugivores for seed dispersal in Myristicaceae. Tropical Conservation Science.6(5): 608-636.
[16] Anita Joshi, Varsha Dattatraya Shahane, Varsha Gore, and Renu Bharadwaj. Hindustan antibiotics Bulletin, 2009; 47-48(1-4): 7-1 Bulletin, 2009; 47-48(1-4): 7-12.
[17] Suman Singh A1, P.K.Omre B and Sandhya Madan Mohan C. Curry leave(Murraya koenigii)a miracle plant. Ind. J. Sci. Res., 2014; 4(1): 46-52.
[18] Nishan Muthulinggam et al, Murraya koenigii (curry leave)- A review on its potential. Journal of PharmTech Research, 2014-2015, Vol.7 (4): 566-572.
[19] Tiwari, Shashank, and Navneet Batra. "Oral drug delivery system: a review." Am. J. Life. Sci.Res 2.1 (2014): 27-35.
[20] K Dheeraj,Jakhar Savita et al, Murraya koenigii (L.) Spreng: an ethnobotanical, Phytochemical and pharmacological review, Journal of Pharmacognosy and Phytochemistry, 2014, 3 (3): 109-119.
[21] Saini C. S et al, A Review on Curry Leaves (Murraya koenigii): Versatile Multi-Potential Medicinal Plant, American Journal of Phytomedicine and Clinical Therapeutics, 2015, 3(4): 363- 368.
[22] Saini C. S et al, Murraya koenigii, IOSR Journal of Pharmacy and Biological Sciences, 2013, Vol. 7(6): 15-18.
[23] Gupta Sumit et al, Isolation of Phytoconstituents From the leaves of Murraya koenigii Linn, Journal of Pharmacy Research, 2009, 2(8): 1313-1314.
[24] Tiwari, Shashank, Sachin Saxena, and Rohit Kumar. "Process Scale Up of Ibrufen Tablet."Journal of Pharmaceutical Sciences and Research 3.10 (2011): 1525.
[25] Ajay S, Rahul S. Sumit G, et al. Comprehensive review: Murraya koenigii Linn. Asian Journal of Pharmacy and Life Sciences. 2011;1(4):417 425.
[26] Sathaye S. Bagul Y. Gupta S, et al. Experimental and toxicologic pathology: official journal Of the gesellschaft fur toxikologische pathologie. Experimental and Toxicologic Pathology 2011;63(6):587–591.urnal
[27] Lawal HA, Atiku MK, Khelpai DG, et al. Hypoglycaemic and hypolipidaemic effect of Aqueous leaf extract of Murraya koenigii in normal and alloxan-diabetic rats. Niger J Physiol Sci.2008;23(1-2):37-40.
[28] Nagappan T, Segaran TC, Wahid MEA, et al. Efficacy of carbazole alkaloids.essential oil And extract of Murraya koenigii in enhancing subcutaneous wound healing in rats.Molecules 2012;17(2):14449-14463.
[29] Gupta V, Sharma M. Protective effect of Murraya koenigii on lipid peroxide formation in Isolated rat liver homogenate. Int J Pharma Bio Sci. 2010;1(3):1-6.
[30] Bandyopadhyaya S, Roy KC. Roy M, et al. Herbal composition of blend of active components Prepared form Murraya koenigii And piper betle useful for blocking of 5- Lipooxygenase Activity. USA: US Pat Appl Publ: 2012. P.1 -86.
[31] Prabhu KA, Tamilanban T. Investigation of anti-diabetic activity of stem of Murraya koenigii. International Journal of Research in Pharmacology and Pharmacotherapeutics. 2012;1(2):165-168.
[32] Tembhurne SV, Sakarkar DM. Hypoglycemic effects of fruit juice of Murraya koenigii (L) In alloxan induced diabetic mice. Int J PharmTech Res. 2009;1(4):1589-1593,
[33] Gupta S, George M, Singhal M, et al. Leaves extract of Murraya koenigii Linn for anti- Inflammatory and analgesic activity in animal models. J Adv Pharm Technol Res. 2010;1(1):68- 77.
[34] Patidar DK. Anti-ulcer activity of aqueous extract of Murraya koenigii in albino rats. Int J Pharma Bio Sci. 2011;2(1):524-529.
[35] Muthumani P. Venkatraman S, Ramseshu K, et al. Pharmacological studies of anticancer, antilnflammatory activities of Murraya koenigii (Linn) Spreng in experimental animals. Journal of Pharmaceutical Sciences and Research. 2009;1:137.
[36] Singh Ateendra et al, Anti-inflammatory and analgesic activity of aqueous extracts of dried leaves of Murraya koenigii Linn, National Journal of Physiology, Pharmacy and Pharmacology, 2016, Vol. 6(4): 286-290.
[37] Ani S. Nushrat et al, The Methanolic Extract from Murraya koenigii L. Inhibits GlutamateInduced Pain and Involves ATP-Sensitive K+ Channel as Antinociceptive Mechanism, Advances in Pharmacological Sciences, 2016,1-6, DOI
[38] Tajuddin., Ahmad, S., Latif, A., Qasmi, I.A., Amin, K.M.Y., 2005. An experimental study of sexual function improving effect of Myristica fragrans Houtt.
[39] (nutmeg). BMC Complement. Altern. Med. 5 (16), 1–7.26 S. Kitamura, P. Poonswad. (2013). Nutmeg-vertebrate interactions in the Asia-Pacific region: importance of frugivores for seed dispersal in Myristicaceae. Tropical Conservation Science. 6(5): 608-636.
[40] M. Mueller, S. Hobiger, A. Jungbauer. (2010). Anti-inflammatory activity of extracts from fruits, herbs and spices. Food chemistry. 122(4): 987-996.

[41] O.A. Olajide, J.M. Makinde, S.O. Awe. (2000). Evaluation of the pharmacological properties of nutmeg oil in rats and mice. Pharmaceutical biology. 38(5): 385-390
[42] P.H. Nguyen, T.V.T. Le, H.W. Kang, J. Chae, S.K. Kim, K.-i. Kwon, D.B. Seo, S.J. Lee, W.K. Oh. (2010). AMP-activated protein kinase (AMPK) from Myristica fragrans (nutmeg) and their anti-obesity effect. Bioorganic & medicinal chemistry letters. 20(14): 4128-4131
[43] Codex Alimentarius Commission (CAC), 2014. Joint FAO/WHO Food Standards Programme Codex Committee on Contaminants in Foods. Discussion Paper on the Establishment of a Maximum Level for Aflatoxin B1 and Total Aflatoxins in Nutmeg and Associated Sampling Plan. CX/CF 14/8/21 www.codex.alimentarius.org.
[44] Agbogidi, O.M., Azagbaekwe, O.P., 2013. Health and nutritional benefits of nutmeg (mystica fragrans Houtt.). Sci. Agric. 1 (2), 40–44.
[45] Djenane, D., Yangüela, J., Roncalés, P., Aider, M., 2013. Use of essential oils as natural food preservatives: effect on the growth of Salmonella enteritidis In liquid whole eggs stored under abuse refrigerated conditions. J. Food Res. 2 (3), 65–78.
[46] Raymond. C. Rowe, Paul. J. Sheskay, Marian. E. Quinn. (2009). Handbook of pharmaceutical excipients. Pharmaceutical press, 6.
[47] Handa SS, Khanuja SPS, Longo G, Rakesh DD. Extraction technologies for medicinal and aromatic plants. Trieste: International Centre for Science and High Technology; 2008. Pp. 21–25.
[48] SWETA V.KULKARNI*, DR.ARUN K.GUPTA, SHUBHAM BHAWSAR FORMULATION AND EVALUATION OF ACTIVATED CHARCOAL PEEL OFF MASK , page no 45_47

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)