

TO FORMULATION AND EVALUATION OF HERBAL SCRUB SOAP

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ABSTRACT

A Herbal Scrub Soap Was Formulated Using Natural Ingredients Such As Oatmeal Powder And Papaya Powder, Which Are Well Known For Their Skin-Friendly Properties. Oatmeal Acts As A Soothing And Anti-Inflammatory Agent, While Papaya Powder Provides Exfoliating Action Due To The Presence Of Natural Enzymes That Help Remove Dead Skin Cells. Essential Oils Like Chamomile Oil And Lavender Oil Were Incorporated Into The Formulation For Their Calming, Antimicrobial, And Skin-Healing Effects. These Oils Also Enhance The Fragrance And Therapeutic Value Of The Soap. Vitamin E Was Added As A Natural Antioxidant To Protect The Skin From Oxidative Damage And To Improve The Stability And Shelf Life Of The Product. Glycerin Soap Base And Additional Glycerin Were Used To Provide Moisturizing Properties, Helping To Maintain Skin Hydration And Softness.

The Combination Of These Natural And Functional Ingredients Results In A Herbal Scrub Soap That Is Gentle, Effective, And Suitable For Regular Use. This Formulation Emphasizes The Use Of Plant-Based Materials And Aims To Deliver Cleansing, Exfoliating, And Nourishing Benefits While Minimizing The Use Of Harsh Chemicals.

KEYWORDS

Anti-Inflammatory, Skin Friendly Formulation, Anti-Oxidant, Moisturizing Effect , Exfoliation Effect, Skin Hydration, Herbal Cosmetics.

1. INTRODUCTION

Cosmetics Are Defined As “The Products Used For The Purposes Of Cleansing, Beautifying,

Promoting Attractiveness Or Alternating The Appearance Of Body". Body Scrub Ingredients Can Be Made From Synthetic And Natural Ingredients. On Regular Use Of Scrubs, Skin Become Glowing, Smooth, Soft And Healthy Because Dead Cells Of Skin Are Removed And Exposing New Skin Cell. Different Evaluations Tests Are Carried Out For The Prepared Herbal This Formulation, Such As Appearance, Spreadability, Irritability, Ph , Washability, Etc. Thus, The Prepared Formulation Of Body Scrub Was Effective For Healthy, Clear And Glowing Skin.^[1] Herbal Scrub Soap Is A Natural Skincare Product That Harnesses The Power Of Botanical Ingredients To Cleanse, Nourish, And Rejuvenate The Skin. Unlike Conventional Soaps That May Contain Harsh Chemicals Or Artificial Fragrances, Herbal Face Soaps Are Often Formulated With Essential Oils, And Other Natural Ingredients Known For Their Beneficial Properties. Herbal Face Soaps Typically Contain A Blend Of Herbs, And Essential Oils Chosen For Their Skincare Benefits.^[2,3] Common Ingredients Include Chamomile, Lavender, And Papaya Seed Powder. Herbal Face Soaps Provide Gentle Yet Effective Cleansing, Removing Dirt, Excess Oil, And Impurities From The Skin Without Stripping Away Its Natural Moisture. They Are Suitable For All Skin Types, Including Sensitive And Acne- Prone Skin. Many Herbal Face Soaps Are Formulated To Hydrate And Moisturize The Skin While Cleansing It.

Throughout History, Plants Have Served As Remedies In Traditional Medicine. Ayurveda, With A Heritage Spanning 5000 Years, Relies On Plant-Based Treatments For Human Health. Recently, There Has Been A Significant Increase In The Utilization Of Herbal Plants For Both Medicinal And Cosmetic Purposes. Cosmetics Play A Role In Enhancing Skin Tone, Texture, Cleansing, Reducing Wrinkles, Combating Oiliness, Acne, Blackheads, Pimples, And Dark Circles. Ayurveda Attributes Skin Issues To Impurities In The Blood.^[4,5] Face Scrubs, Cosmetic Products Containing Fine Exfoliating Particles, Work By Removing Surface Dead Cells And Promoting Cell Renewal In The Sub- Epidermal Layer. The Herbal Exfoliating Scrub Helps Diminish Age-Related Changes And Counteracts Damage From Environmental Factors.^[4] It Effectively Removes Dirt, Grime, And Oils From The Face, Contributing To Clean And Clear Pores, Which Is Beneficial For Skin Health.^[6,7]

❖ Skin Anatomy

Skin Is The Largest Organ Of The Body And Is Mainly Divided Into Three Layers. Understanding These Layers Helps Explain How A Scrub Soap (Exfoliating Soap) Works.^[8,9,10]

A) Epidermis (Outer Layer)

What It Does: Acts As A Barrier Against Bacteria, Chemicals, And Uv Rays. It Also Prevents Water Loss.

➤ Relevance To Herbal Soap

- I) Herbal Soaps Mainly Interact With This Layer.
- II) They Can Help Cleanse, Exfoliate, And Nourish The Skin.

b) Dermis (Middle Layer)

What It Does: Provides Structure And Elasticity. Contains: Collagen & Elastin.

➤ Relevance To Herbal Soap

- I) Herbal Soaps With Anti-Inflammatory Or Antioxidant Ingredients Can Soothe This Layer Indirectly.
- II) Herbal Soaps Help To Regulate Oil Can Prevent Acne And Clogged Pores.

c) Hypodermis (Subcutaneous Layer)

What It Does: Stores Fat And Insulates The Body. It Connects Skin To Underlying Muscles.

➤ Relevance To Herbal Soap

- This Layer Is Not Directly Affected By Soap, But A Well-Maintained Outer Skin Barrier Helps Overall Skin Health And Hydration.

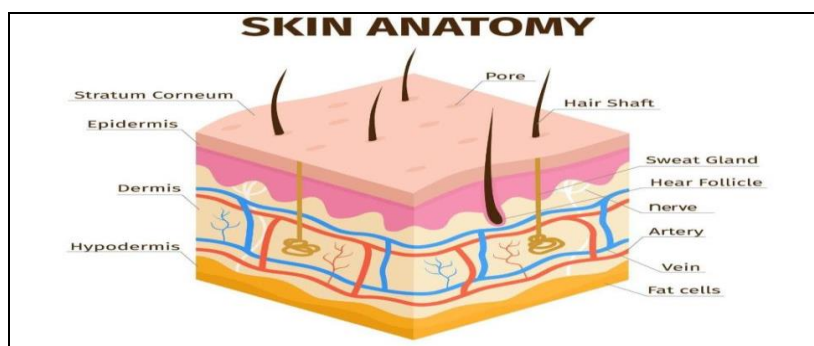


Fig. No. 1: Skin Anatomy.

❖ Herbal Scrub Soap

Herbal Scrub Soap Is A Natural Skincare Preparation Used For Cleansing, Exfoliating, And Nourishing The Skin. It Is Formulated Using Herbal Ingredients Such As Oatmeal Powder,

Papaya Seed Powder, Glycerin, Essential Oils, And Plant Extracts. The Scrub Particles Present In The Soap Help Remove Dead Skin Cells, Dirt, And Excess Oil From The Skin Surface, Resulting In Smoother, Softer, And Healthier Skin.

Herbal Scrub Soaps Are Preferred Over Synthetic Soaps Because They Are Gentle On The Skin And Produce Minimal Side Effects. Natural Ingredients Like Oatmeal Provide Moisturizing And Soothing Effects, While Papaya Seed Powder Acts As A Natural Exfoliating Agent That Helps In Deep Cleansing And Improving Skin Texture. Essential Oils Such As Lavender Oil And Chamomile Oil Provide Calming, Anti-Inflammatory, And Refreshing Properties.^[11,12]

Regular Use Of Herbal Scrub Soap Improves Blood Circulation, Promotes Healthy Skin Renewal, And Maintains The Natural Ph Balance Of The Skin. Due To Increasing Awareness About Herbal Cosmetics And Natural Skincare Products, Herbal Scrub Soaps Have Gained Significant Importance In Cosmetic And Pharmaceutical Preparations.^[13,14]

❖ **Benefits Of Herbal Scrub Soap**

1. Herbal Scrub Soap Removes Dirt, Excess Oil, And Impurities From The Skin Pores, Keeping The Skin Clean And Fresh.
2. Regular Use Helps Soften Rough Skin And Improves Overall Texture, Giving A Healthy Glow.
3. Ingredients Like Glycerin And Oils Help Retain Moisture, Preventing Dryness And Keeping Skin Hydrated.
4. Herbs Like Chamomile And Lavender Help Soothe Irritation, Redness, And Inflammation.
5. By Removing Excess Oil And Unclogging Pores, It Can Help Reduce Acne And Prevent Breakouts.
6. Scrubbing Action Improves Blood Flow, Which Supports Healthy And Glowing Skin.
7. Natural Ingredients Like Papaya Contain Enzymes That Help Lighten Tan And Improve Skin Tone.

❖ **ADVANTAGES**

1. Makes Skin Soft, Smooth, And Healthy.
2. Helps In Reducing Dullness And Promotes Natural Brightness.

3. Contains Glycerin And Natural Oils That Keep Skin Hydrated.
4. Removes Dead Skin Cells Using Natural Scrub Agents
5. Has Moisturizing Effect Due To Natural Oils And Glycerin.

❖ DISADVANTAGES

1. Natural Ingredients May Support Contamination If Not Stored Properly.
2. Takes Time To Show Visible Effects.
3. Some Individuals May React To Certain Herbal Ingredients.
4. Scrub Particles May Not Distribute Evenly In The Soap.
5. Quality Herbal Ingredients Can Be Expensive

2. LITERATURE SURVEY

1. **Sakshi A. Temak (2025) :-** Scrubbing Soap Are The Agents Which Are Use To Remove The Dead Cell From Skin, Pigmentation And Blackheads, White Heads And Make Skin Glowing, Smooth, Soft And Healthy. Scrubbing Soap Can Be Directly Applied Onto The Skin By Gently Massage Is Recommended On Application Of The Scrubbing Soap Which Helps To Improve Blood Circulation And Increase Oxygen Supply To All Surface Of The Skin. Due To Some Environmental Factors Many People Face Some Problem Like Pigmentation And Uneven Skin Tone. Solution For This Problem Is Use Of Scrubbing Soap Which Consist Ingredients Which Increases Cleansing, Softening, Moisturizing, Fairness Of Skin.
2. **Nirupa R. Shyora (2025) :-** This Study Confidently Explores Formulating And Evaluating An Innovative Herbal Scrub Soap That Prominently Features Cucumber (*Cucumis Sativus*) As Its Key Active Ingredient. The Primary Goal Is Fully Harness Cucumber's Remarkable Hydrating, Anti-Inflammatory, And Antioxidant Properties, While Seamlessly Integrating A Natural Exfoliant To Create A Truly Multifunctional Product. Utilizing A Cold-Process Method, The Soap Is Expertly Crafted By Combining High-Quality Natural Oils, Sodium Hydroxide, And Ground Cucumber Pulp, Enhanced With Finely Milled Herbal Exfoliants Such Oatmeal And Walnut Shell Powder.
3. **Mr. Yogesh A. Chaudhari (2024) :-** Cosmetics Have Been Used For Centuries To Enhance Beauty And Improve Skin Health. Ayurvedic Cosmetics, Also Known As Herbal Scrub Soap ,Utilize Natural Ingredients With No Side Effects On The Body

.These Products Are Based On Botanical Ingredients With A Long History Of Traditional Medicine Usage. Facial Scrubs Are Essential For Exfoliation And Maintaining Smooth Skin, While Herbal Soaps Contain Antibacterial And Antifungal Agents For Treating Various Skin Issues. By Incorporating Ingredients Like Neem, Tulsi, And Red Lentil Powder, These Products Provide Cleansing, Softening, Moisturizing, And Fairness To The Skin

4. **Pallavi Katyarsing Jadhav (2024) :-** A Herbal Soap Was Formulated Using The Powder Of nutmeg. *Myristica Fragrans* Belonging To The Family *Myristicaceae*, It Has Been Cultivated throughout The World And Used For Food Flavoring, Essential Oil Applications And In Traditional Medicines. Mostly Nutmeg Contains Terpenes And Phenylpropenes. Chemical Composition Of These Constituents Varies Due To Different Cultivation Conditions. Nutmeg Is Considered As Essential Ingredient Of Numerous Industrial Applications Ranging From Food To Cosmetics. Its Pharmaceutical Products Are Also Important Due To Its Antioxidant And Antimicrobial Properties.
5. **Rekha Goukonde (2024) :-** Scrubbing Soap Are The Agents Which Are Use To Remove The dead Cell From Skin, Pigmentation And Blackheads, White Heads And Make Skin Glowing, Smooth, Soft And Healthy. Scrubbing Soap Can Be Directly Applied Onto The Skin By Gently Massage Is Recommended On Application Of The Scrubbing Soap Which Helps To Improve Blood Circulation And Increase Oxygen Supply To All Surface Of The Skin. Due To Some Environmental Factors Many People Face Some Problem Like Pigmentation And Uneven Skin Tone. Solution For This Problem Is Use Of Scrubbing Soap Which Consist Ingredients Which Increases Cleansing, Softening, Moisturizing, Fairness Of Skin. In This Preparation Neem, Tulsi And Poppy Seeds Are Use As Main Active Ingredient.
6. **Sushil Kumar Pal (2024) :-** Herbal Face Scrubs Have Become Increasingly Popular In Recent Years Due To Their Ability To Improve Skin Health And Are Available At A Low Cost. These Scrubs Contain Natural Ingredients Such As Rice Powder And Orange Peel Powder, *Ficus Religiosa* Etc. Which Work To Exfoliate, Whiten, And Prevent Free Radical Damage. Vitamin E, Rose Oil, And Almonds Are Used To Hydrate And Exfoliate The Skin. Neutralizers And Herbal Preservatives Like Neem, And Rosemary Are Used In The Variuos Formulations.

- 7. Ghadage P.K (2021) :-** In Today's Life For Both Women And Men Cosmetics Plays An Important Role To Beautifying And Altering The Appearance Of Skin. The Use Of Natural Ingredients To Remain Healthy And Of Good Appearance, The Skin Surface Requires Frequent Cleansing To Remove Oil, Sebum And Other Secretions, Dead Cells, Crusts And Applied Make-Ups. Herbal Cosmetic Has Less Or No Side Effects Hence Use Of Herbal Cosmetics Get Increased.
- 8. Dhanshree Dilip Gavali (2022) :-** For The Healthy And Nourish Skin Periodic Cleansing Requires Which Removes The Dirt, Dead Skin, Sebum Other Secretion Extends The Skin And Their Appendix By Chemical Topical Application. This Is Useful For Making Skin Charming And Beautiful. Cosmetic Plays Very Important Role In Everyone's Life To Make Joyful Skin. Nowadays Herbal Cosmeceuticals Are In Demand Due To Less Or No Side Effect. Herbal Cosmeceutical Usually Contain Plant Part Which Posses Antimicrobial, Antiaging, Antiacne, Antioxidant Property.
- 9. Mahajan Shraddha (2020) :-** The Main Objective Of Present Study Was To Prepare A Herbo-Mineral Facial Scrub. Majorly Facial Skin Comes In Direct Contact Of Dirt, Pollution, Dust Particles And Having Large Number Of Dead Cells. In Order To Remove The Dead Cells And Make The Skin Healthy, Cleaned An D Nourished, Some Facial Preparations Required. The Prepared Scrub Contains Various Natural Ingredients Which Are Safer For Use And Having Fewer Side Effects And Also They Posses Antiseptic, Anti-Infective, Antioxidant, Anti-Aging And Humectant Properties. The Scrub Was Prepared By Using Simple Mixing Method Using Various Ingredients Such As Poppy Seeds, Neem Extract, Tulsi Extract, Aloe Vera Gel, Almond Oil, Mixed In Carbopol 934, Rest Of Ingredients Such As Glycerin, Triethanolamine, Preservatives And Perfuming Agent Were Also Added To This Preparation With Homogeneous Mixing.

3. AIM :-To Formulation & Evaluation Of Herbal Scrub Soap.

4. OBJECTIVE

- To Achieve Effective Cleansing And Removal Of Dirt, Oil, And Impurities From The Skin.
- To Provide Gentle Exfoliation For Removing Dead Skin Cells.
- To Improve Skin Texture, Making It Soft, Smooth.
- To Enhance Skin Brightness And Natural Glow.

- To Ensure Safety And Minimize Irritation By Avoiding Harmful Chemicals.
- To Reduce Dark Sports.

5. PLAN OF WORK

- ❖ Literature Survey
- ❖ Drug And Excipient Profile
- ❖ Methodology
- ✓ Preparation Of Herbal Powder

- ❖ Formulation Of Scrub Soap
- ✓ Mixing Of Herbal Powder With Base Ingredients.
- ✓ Preparation Of Scrub Soap Formulation.

- ❖ Evaluation Of Herbal Scrub Soap
- ✓ Physical Evaluation (Color, Odor, Appearance.)
- ✓ pH Determination
- ✓ Foam Ability
- ✓ Foam Retention
- ✓ Skin Irritation Test
- ✓ Stability Studies
- ✓ Washability
- ✓ Hardness Test
- ✓ Exfoliation Test
- ✓ Spreadability Test

- ❖ Result
- ❖ Conclusion

6. DRUG AND EXCIPIENT PROFILE ❖ API (DRUG)

1. **Oatmeal Powder Botanical Name** : Avenasativa **Family** : Poaceae (Gramineae)

Biological Source

- Dried And Finely Powdered Seeds (Grains) Of Avena Sativa.

Active Constituents

- Beta-Glucan
- Avenanthramides (Anti-Inflammatory Compounds)
- Saponins
- Flavonoids
- Proteins & Lipids
- Vitamins (B-Complex, Vitamin E)
- Minerals (Zinc, Iron, Magnesium).

Therapeutic Uses

- Moisturizes Dry Skin
- Soothes Irritation And Itching
- Anti-Inflammatory Action
- Helps In Eczema And Dermatitis
- Skin Cleansing
- Improves Skin Barrier Function

Mechanism Of Action

- Beta-Glucan Forms A Protective Film → Locks Moisture
- Avenanthramides Reduce Inflammation & Redness
- Saponins Act As Natural Cleansers → Remove Dirt And Oil
- Provides Antioxidant Effect → Protects Skin From Damage

Role In Scrub Soap

- Acts As A Gentle Exfoliating Agent.
- Removes Dead Skin Cells Without Irritation.
- Provides Soothing And Moisturizing Effect.
- Improves Soap Texture And Skin Feel.
- Suitable For Sensitive Skin Formulations. ^[15,16]



Fig. No. 2: Oatmeal Powder.

2. Papaya Seed Powder Botanical Name : Carica Papaya **Family:** Caricaceae**Biological Source**

- Dried And Powdered Seeds Of Ripe Fruit Of Carica Papaya.

Active Constituents

- Papain (Enzyme)
- Chymopapain
- Alkaloids (Carpaine)
- Flavonoids
- Phenolic Compounds
- Fatty Acids (Oleic Acid, Palmitic Acid)

Therapeutic Uses

- Natural Exfoliant
- Skin Brightening
- Removes Dead Skin Cells
- Anti-Acne (Antimicrobial Action)
- Helps In Reducing Pigmentation
- Deep Skin Cleansing

Mechanism Of Action

- Papain Enzyme Breaks Down Dead Proteins → Removes Dead Skin
- Antimicrobial Action Helps Reduce Acne-Causing Bacteria
- Antioxidants Protect Skin From Damage
- Promotes Cell Renewal And Smoother Skin

Role In Scrub Soap

- Works As A Strong Natural Exfoliating Agent
- Helps In Removing Blackheads & Dirt
- Improves Skin Brightness And Smoothness
- Gives Scrub Texture To Soap ^[17, 18]



Fig. No. 3: Papaya Seed Powder.

❖ EXCIPIENTS

1. Chamomile Oil

Botanical Name

- Matricaria Chamomilla
- Chamaemelum Nobile

Family: Asteraceae

Biological Source

- Essential Oil Obtained By Steam Distillation Of Dried Flower Heads Of Chamomile Plant.

Active Constituents

- Chamazulene
- Bisabolol (A-Bisabolol)
- Flavonoids (Apigenin, Luteolin)
- Terpenoids

Therapeutic Uses

- Anti-Inflammatory
- Soothes Irritated Skin
- Anti-Allergic Effect
- Mild Antiseptic
- Calms Skin Redness And Itching
- Promotes Wound Healing

Mechanism Of Action

- Chamazulene & Bisabolol Reduce Inflammation And Irritation
- Flavonoids Provide Antioxidant Protection
- Helps In Inhibiting Inflammatory Mediators
- Provides Calming And Soothing Effect On Skin

Role In Scrub Soap

- Gives Soothing Effect After Exfoliation

Reduces Irritation Caused By Scrubbing

- Adds Pleasant Natural Fragrance
- Improves Skin Softness And Healing
- Suitable For Sensitive Skin Formulations ^[19, 20]



Fig. No. 4: Chamomile Oil.

2. Vitamin E Capsule

Synonym: Alpha-Tocopherol **Biological Source**

- Vegetable Oils (Such As Wheat Germ, Sunflower, Corn. And Soybean Oils) Nuts (As Almonds & Peanuts.
- Seeds (Such As Sunflower Seeds) Green Leafy Vegetables (Such As Spinach And Broccoli).

Therapeutic Uses

- Moisturizes The Skin
- Reverses Premature Skin Aging
- Lightens Dark Spots. Strong Antioxidant
- Protects Skin From Damage (Uv, Pollution)

- Anti-Aging Effect
- Promotes Skin Healing
- Reduces Scars And Pigmentation



Fig. No. 5: Vitamin E Capsule.

3. Lavender Oil

Botanical Name :- Lavandula Angustifolia

Biological Source

- Essential Oil Obtained By Steam Distillation Of Fresh Or Dried Flowering Tops Of Lavandula Angustifolia.

Family :- Lamiaceae

Active Constituents

- Linalool
- Linalyl Acetate
- Camphor (Small Amount)
- Terpinen-4-Ol
- Langustifoli

Therapeutic Uses

- Anti-Inflammatory
- Antiseptic
- Soothes Irritated Skin
- Anti-Acne
- Promotes Wound Healing
- Provides Calming And Relaxing Effect

Mechanism Of Action

- Linalool & Linalyl Acetate Reduce Inflammation And Irritation
- Shows Antimicrobial Action → Helps Control Acne-Causing Bacteria
- Provides Antioxidant Effect → Protects Skin
- Gives Calming Effect On Skin And Nerves

Role In Scrub Soap

- Adds Pleasant Fragrance
- Provides Soothing Effect After Exfoliation
- Reduces Skin Irritation
- Enhances Antiseptic Property Of Soap
- Improves Overall Skin Feel And Relaxation



Fig. No. 6: Lavender Oil.

4. Glycerin Soap Base

Biological Source

Prepared From Vegetable Oils (Like Coconut Oil, Palm Oil, Castor Oil) Through Saponification, With Added Glycerin, Alcohol, And Sugar To Make It Transparent.

Active Constituents

- Glycerin (Glycerol)
- Fatty Acid Salts (Soap Base)
- Sorbitol / Sugars
- Water & Small Amount Of Alcohol

Therapeutic Uses

- Cleanses Skin Gently
- Provides Moisturizing Effect

- Prevents Skin Dryness
- Suitable For Sensitive Skin
- Maintains Skin Softness And Smoothness

Mechanism Of Action

- Soap Molecules Remove Dirt And Oil From Skin (Cleansing Action)
- Glycerin Acts As A Humectant → Retains Moisture
- Forms A Protective Layer To Prevent Dryness
- Provides Mild And Non-Irritating Cleansing

Role In Scrub Soap

- Acts As The Base Material For Soap Preparation
- Holds All Active Ingredients (Oatmeal, Papaya, Oils, Etc.)
- Provides Structure And Shape To Soap
- Gives Transparency And Smooth Texture
- Ensures Uniform Mixing Of Scrub Particles



Fig. No. 7: Glycerin Soap Base.

7. METHOD OF PREPARATION

1. Preparation Of Powders

- Dry Oatmeal And Papaya Seeds Properly.
- Grind Them Separately Using A Grinder.
- Pass Through A Sieve (60–80 Mesh) To Obtain Fine Powder.
- Store In An Airtight Container.

- Cut The Glycerin Soap Base Into Small Pieces.



- Melt Using A Double Boiler Method (Avoid Direct Heating) and Heat Until Fully Melted And Clear.
- Add Oatmeal Powder And Papaya Seed Powder Slowly.Mix Well To Avoid Lumps.



- Add Lavender Oil (For Fragrance & Calming Effect), Chamomile Oil (Anti-Inflammatory), Vitamin E (Skin Nourishment)
- Stir Continuously To Ensure Uniform Mixing.
- Pour The Mixture Into Soap Moulds.



- Tap Gently To Remove Air Bubbles and Allow The Soap To Cool At Room Temperature For 2– 3 Hours.

12. You Can Also Keep It In A Refrigerator For Faster Setting.
13. Remove Soap From Mould Carefully.
14. Wrap In Butter Paper Or Store In Airtight Container and Keep In A Cool, Dry Place^[21,22]

8. FORMULATION OF SCRUB SOAP [F1 to F5]

Sr.No	Ingredients	F1	F2	F3	F4	F5
1	Oatmeal Powder	3.5 gm	3.5 gm	3.5 gm	3.5 gm	3.5 gm
2	Papaya Seed Powder	2.5 gm	2.5 gm	2.5 gm	2.5 gm	2.5 gm
3	Chamomile Oil	1 ml	0.5ml	1.5 ml	1.7 ml	1.9 ml
4	Vitamin E Capsule	0.5 ml	0.5 ml	0.5 ml	0.5 ml	0.5 ml
5	Lavender Oil	1.5 ml	1ml	1.5 ml	2 ml	1 ml
6	Glycerin	1.5 ml	1 ml	1.5 ml	2 ml	1 ml
7	Soap Base	Q.S Upto 50 gm	Q.S Upto 50 gm	Q.S Upto 50 gm	Q.S Upto 50 gm	Q.S Upto 50 gm

10. EVALUATION OF SCRUB SOAP

10.1 Physical Evaluation:- Visual Observation Was Made Of The Formulation's Physical Appearance. Color, Order, Texture, And Consistency Were All Observed During This Test.^[23]

10.2 pH Determination:- The pH Was Determined By Using pH Paper. The pH Was Found To Be Basic In Nature.^[24]

10.3 Foam Ability test :- Small Amount Of Formulation Was Taken In A Measuring Cylinder And Water In It And Shake For 10 Times And Note The Final Volume.

10.4 Foam Retention test:- 25 ml Of The One Percent Soap Solution Was Taken Into A 100 ml Graduated Measuring Cylinder The Cylinder Was Covered With Hand And Shaken 10 Times. The Volume Of Foam At 1

Minutes Interval For 4 Minutes Was Recorded . It Was Found To Be 5 Minutes.^[25]

10.5 Skin Irritation Test:- Performed By Rubbing Soap Into The Skin For Ten Minutes. If There Is No Irritation, The Product Is Regarded As Non-Irritating.

10.6 Stability Study :- Stability Of The Formulation Is Check By Placing The Scrubbing Soap In A Container On Room Temperature For One Month.^[26]

10.7 Washability Test :-The Scrubbing Soap Was Applied Over The Skin And Was Washed With Water .Formulation On Applied On Skin Was Easily Removed By Washing With Water Tested Manually.^[27]

10.8 Hardness Test :- The Hardness Of The Soap Is Evaluated By Pressing It Manually Or Using A Penetrometer To Measure Resistance To Deformation, Where Less Indentation Indicates Higher Hardness.^[28]

10.9 Exfoliation Test :- Exfoliation Is Evaluated By Gently Rubbing The Soap On The Skin Or A Test Surface And Observing The Ability Of Scrub Particles To Remove Dead Cells, Where Effective Exfoliation Produces A Smooth And Clean Surface Without Causing Irritation.^[29]

10.10 Spreadability Test :- Spreadability Is Evaluated By Applying The Soap On A Glass Plate Or Skin Surface And Measuring The Ease With Which It Spreads Under Slight Pressure, Where Greater Spreading Indicates Better Spreadability.^[30]

11. RESULT

❖ Table 8: Physical Evaluation.

Sr. No	Formulations	Colour	Odour	Texture	Consistency	Result
1.	F1	Light Brown	Aromatic	Smooth	Solid	Pass
2.	F2	Brown	Aromatic	Rough	Solid	Pass
3.	F3	Dark Brown	Aromatic	Smooth & Uniform	Solid	Pass
4.	F4	Dark Brown	Aromatic	Rough	Solid	Pass
5.	F5	Dark Brown	Aromatic	More Rough	Solid	Pass

❖ Table 9: pH Examination.

The Ideal pH Examination Value For Herbal Scrub Soap Is Generally In The Range Of 5.5-7.0

Sr. No	Formulations	Observation	Result
1.	F1	5.2	Pass
2.	F2	5.5	Pass
3.	F3	6.5	Excellent
4.	F4	7.2	Fail
5.	F5	7.5	Fail

❖ Table 10: Foam Ability Test.

Sr. No	Formulations	Observation	Result
1.	F1	20 ml	Fail
2.	F2	30 ml	Fail
3.	F3	55 ml	Excellent
4.	F4	40 ml	Fail
5.	F5	50 ml	Pass

❖ Table 11: Foam Retention.

Sr. No	Formulations	Observation	Result
1.	F1	2 min	Fail
2.	F2	3 min	Fail
3.	F3	5-6 min	Excellent
4.	F4	1 min	Fail
5.	F5	4 min	Pass

❖ Table 12: Skin Irritation Test.

Sr. No	Formulations	Observation	Result
1.	F1	No Irritation	Pass
2.	F2	No Irritation	Pass
3.	F3	No Irritation	Pass
4.	F4	No Irritation	Pass
5.	F5	No Irritation	Pass

❖ Table 13: Stability Study.

Sr. No	Formulations	Observation (Room Temperature)	Result
1.	F1	Unstable	Fail
2.	F2	Unstable	Fail
3.	F3	Stable	Pass
4.	F4	Unstable	Fail
5.	F5	Unstable	Fail

❖ Table 14: Washability Test.

Sr. No	Formulations	Observation	Result
1.	F1	Good	Pass
2.	F2	Good	Pass
3.	F3	Excellent	Pass
4.	F4	Good	Pass
5.	F5	Moderate	Pass

❖ Table 15: Hardness Test.

Sr. No	Formulations	Observation	Result
1.	F1	Good	Pass
2.	F2	Good	Pass
3.	F3	Excellent	Pass
4.	F4	Good	Pass
5.	F5	Moderate	Pass

❖ **Table 15: Exfoliation Test.**

Sr. No	Formulations	Observation	Result
1.	F1	Mild	Pass
2.	F2	Moderate	Pass
3.	F3	Moderate & Uniform	Excellent
4.	F4	High	Pass
5.	F5	High	Pass

❖ **Table 15: Spreadability Test.**

Sr. No	Formulations	Observation	Result
1.	F1	Moderate	Pass
2.	F2	Moderate	Pass
3.	F3	Best	Excellent
4.	F4	Good	Pass
5.	F5	Low	Pass

❖ **Final Product**

Fig. No. 8: Final Formulation Of Scrub Soap [F3].

12. CONCLUSION

This Study Successfully Formulated And Evaluated A Herbal Scrub Soap Containing Papaya Seed Powder, Oatmeal Powder, Chamomile Oil, And Lavender Oil With Beneficial Skin Cleansing And Exfoliating Properties. Five Different Formulations (F1–F5) Were Prepared And Assessed For Various Evaluation Parameters Including Ph, Colour, Odour, Texture, Foamability, Foam Retention, Hardness, Spreadability, Washability, Stability, Irritation Test, And Exfoliation Property. Among All The Formulations, F3 Showed The Most Satisfactory Performance With Balanced Physicochemical Characteristics, Good Cleansing Action, Suitable Hardness, Excellent Foamability, And Effective Exfoliation Effect. The Improved Skincare Activity Of The Scrub Soap May Be Due To The Natural Bioactive Constituents Present In Papaya Seeds, Oatmeal, And Essential Oils. The Formulation Also Showed Good Stability And No Significant Skin Irritation During The Study. Therefore, The Developed Herbal Scrub Soap Can Be Considered A Promising And Effective Natural Skincare Product

For Cleansing, Considered A Promising And Effective Natural Skincare Product For Cleansing, Exfoliating, And Maintaining Healthy Skin.

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