WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 9, 483-499. Review Article ISSN 2277– 7105

BASIC TEST FOR CRUDE DRUG USED IN FORMULATION OF MULTIPURPOSE CREAM

[1]Priyanka A. Patil, [2]Puja B. Patil, [3]Ravindra D. Patil, [4]Roshani R. Patil, [5*]Junaid S. Shaikh, [6]Mahavir N. Sanghavi

SSJIPER Jamner.

Article Received on
04 April 2023,

Revised on 25 April 2023,
Accepted on 14 May 2023

DOI: 10.20959/wjpr20239-28116

***Corresponding Author**
Junaid S. Shaikh
SSJIPER Jamner.

ABSTRACT

This Project work contains information related to **basic test of crude drugs involve in Multipurpose Cream**, Advantages, disadvantages, uses, ingredients used in formulations of Multipurpose cream, evaluation parameters importance of herbal cosmetics have been studied. With the beginning of the civilization, Mankind had the magnetic dip towards impressing others with their looks. The only thing they had was the Knowledge of nature, compiled in the Ayurveda. With the science of Ayurveda, several herbs and floras were used to make Ayurvedic cosmetics that really worked. Multipurpose creams have a variety of applications such as cleansing, beautifying, altering appearance, moisturizing etc. to skin protection against bacterial, fungal infections as well as healing cuts, burns, wounds on the skin. These semi solid preparations are safe to use by the public and society because it contains natural herbs. Different crude drugs like Aloe barbadensis (Aloe Vera leaves), Azadirachta Indica (Neem-leaves), Curcuma longa (Turmeric-rhizomes), Emblica Officinalis (Amla), Carica papaya (papaya) are used to formulate the cream. We have encourage other peoples and share the information about multipurpose cream that it is used for multipurpose such as it act as an anti-inflammatory, antiseptic, antifungal, antibacterial, skin irritation, dry skin, moisturizer, reduce scar pigmentation etc. also turmeric used to add glow to skin and to promote wound healing.

KEYWORDS: Cosmetics, herbal cream, Turmeric, Neem, Aloe Vera, Ayurveda, Parameters, formulation etc**.**

INTRODUCTION

Basic test describe procedures for testing pharmaceutical substances, medicinal plants and pharmaceutical dosage form.[1] Most of the pharmaceutical substances and dosage form covered are included in WHO model list of essential drug. The present article describes procedures for testing medicinal plant materials. These basic tests represent one of many elements of quality assurance in the pharmaceutical supply system. They have been devised the following objective.

- To provide a simple and readily applicable method for verifying the identity of a substance, using a limits range of easily available reagents, when the labelling and physical attributes give rise to doubt.
- To provide a practicable means of conforming the identity of a substance when a fully equipped laboratory is not available.
- To indicate whether gross degradation has occurred in certain substances that are known to decompose readily under adverse condition.

Basic test are not, in any circumstances, intended to replace the requirements of The International Pharmacopoeia or other pharmacopoeial monographs. These give an assurance of quality where as basic test merely confirm identity. In 1994, the WHO expert committee on specification for pharmaceutical preparations agreed that the scope of these test should be extended to include additional information and references to other simple test methodologies. The usefulness of simplified analytical technology and supporting elements and associated training material was fully endorsed by committee. Basic test need not to be carried out by fully qualified pharmacist or chemist but they should be perform by person with some understanding of analytical chemistry such as that acquired in courses for pharmaceutical assistents. The facilities needed for carrying out basic test, the equipment required and method for the determination of melting characteristics are described in detail. Several test are described for most preparation. Not all of these need to be applied to any one sample. If, however there is any reason to suspect that the product is mislabelled or substandard, all test described should be performed. By their nature, simplified test cannot be totally reliable.[2]

Fig. Aloe-vera (22)

1. ALOE VERA

Botanical Name: Aloe barbadensis miller

Family: Asphodelaceae

Synonyms: Aloe, kumari, Mussbar

Biological Source: Aloes is the dry juice of leaves of Aloe barbadensis Miller known as curacao aloes or of Aloe perryi Baker known as Socotrine aloes of Aloe ferox Miller and hybrids of this species with Aloe African Miller and Aloe spices Baker, known as cape aloes, belongings to family Liliaceae.

Geographical Source: Aloes is indigenous to eastern and Southern Africa and grown in Cape colony and Zanzibar and Islands of Socotra. It is also cultivated in Caribbean Island Europe and many parts of India, including North West Himalayan region. The difference species, 'Vera' means true 'ferox' means wild, ' spicata' refers to flowers in Spikes, and 'barbadensis' and 'Africana' refer to habitat of the plant. Among the focus it has been reported that in Congo region of Africa the native.

Chemical Constituents: Aloe may contain

1. 30% aloin which is a mixture of three isomer barbarous
2. b-barbaloin and isobarbaloin.
3. Aloe also contains alongside A and B, O glycosides of alien in which L- rhamnose is combined with OH of hydroxymethyl group at 11-C atom. Barbaloin on hydrolysis yields.[3]

Medicinal uses of Aloe Vera

1. Aloe Vera, help inhibit the growth of certain bacteria that can cause infections in humans.
2. Aloe Vera is known for its antibacterial, antiviral, and antiseptic properties. This is part of why it may help heal wounds and treat skin problems.
3. Aloe Vera is commonly known as a topical gel used to treat Sunburn.

4. Preliminary research has indicated that aloe Vera may benefit your skin, dental, oral, and digestive healthy.[4]

Melting point: liquify at 360

Procedure:

For these test, 1g of aloe powder is boil which 10 ml water and filter with the help of kieselghur. The filtrate is used for bromine test and Schoentetens reaction.

1) Bromine test: Freshly prepared bromine solution is added to small quantity of filtrate. The test gives pale yellow precipitate of tetrabromalin.

2) Borax test: Little quantity of above treated with borax shake well till the borax dissolved. When few drops of this solution are added to a test solution filled with water. A green fluorescence appears.

3) Nitric acid test: Crystals of sodium nitrite along with small quantity of acetic acid added to aqueous solution of aloes. The observation are as follows:

a. Curacao aloes - deep brownish red colour

b. Cape aloes – brownish colour changing to green

c. Socotrine aloes – pale brownish – yellow colour

d. Zanzibar aloes – yellowish brown colour.[5]

2. NEEM

Botanical Name: Azadirachta indica

Family: Meliaceae

Synonyms: Neem[6]

Biological Source: fresh or dried leaves and seed Oil of Azadirachta indica.[4]

Geographical Source: It is one of two species in the genus Azadirachta, and is native to the Indian subcontinent. It is typically grown in tropical and semi-tropical regions. Neem trees also grow on islands in southern Iran.

Chemical Constituents: Natural compounds present in Neem are

1. Triterpenes or Limonoids
2. Azadirachtan, salannin, meliantriol and nimbin are well known the bitter constituents ‘
3. The nimbin contains an acetoxy, a lactone, an ester, a methoxy and an aldehyde group.[7]

Medicinal uses of Neem

1. Neem leaf is used for leprosy, eye disorders, bloody nose, intestinal worms, stomach upset, loss of appetite, skin ulcers.
2. Diseases of the heart and blood vessels (cardiovascular disease), fever, Diabetes, gum disease (gingivitis), and liver problems. The leaf is also used for birth control and to cause abortions.[4]

Melting Point: 160°C[24]

- This crude drug is identified by following description.

A. Macroscopic

Leaves-Compound, alternate, rachis 15-25cm long, 0.1cm thick ;leaflets with oblique base, opposite, exstipulate, lanceolate, acute, serrate, 7-8.5cm long and 1.0-1.07 cm wide, slightly yellowish–green; odour, imdistinct; taste, bitter.

B. Microscopic

Leaf

Midrib- Leaflet through midrib shows a biconvex outline epidermis on either side covers extremely which thick cuticle. Below epidermis four to five layers collenchyma present ;stele composed of one crescent shape vascular bundle towards lower and two to three smaller bundles towards upper surface rest of tissue composed of thin walls parenchymatous cells having secretory cells and rosette crystals of calcium oxalate phloem surrounded by non-lignified fibre stand crystal also present in phloem region.

Lamina-shows dorsiventral structure epidermis on either surface composed on thin walled tangentially elongate cells, covered extremely which thick cuticle anomocytic stomata present on lower surface only palisade single layer spongy parenchyma composed of five to

six layer thin walled cells trans versed by number of veins rosette crystals of calcium oxalate present in a few cells palisade ratio 3.0:4.5 stomata index- 13.0, 14.5 on lower surface and 8.0 to11.5 on upper surface.

Powder- green; shows vessels, fibres, rosette crystals of calcium oxalate, fragments of spongy and palisade parenchyma.[8]

C. Organoleptic

Colour- smooth and dark green

Odour-typical

Taste- bitter

Base-unequal

Apex-Ovate-lanceolate.[24]

Fig: Turmeric (25)

2. TURMERIC

Botanical Name: Curcuma longa and Curcuma aromatica

Family: Zingiberaceae

Synonyms: Haldi, manjal, Indian saffron curcuma

Biological Source: It is a dried rhizomes of curcuma longa

Geographical Source: Turmeric thrives in rainy tropical areas such as the Indian subcontinent and Southeast Asia.

Chemical Constituents: Turmeric powder is about

1. 60-70% carbohydrates 6-13% water, 6-8% proteins 5-10% far, 3-7% dietary mineral, 3-7% essential oils, 2-7% dietary fibre, 1-6% curcuminoids.

2. Phytoconstituents of turmeric include diarylheptanoids, a class including numerous curcuminoids – curcumin, demothoxycurcumin, and bisdemethoxycurcumin.

3. Curcumin constitutes up to 3.14% of assailed commercial samples of turmeric powder.

Medicinal uses

1. It appears to have a good potential as a wound healing powder when applied externally to septic and aseptic wounds. 2. It is also used in prevention, treatment or control of psoriasis and other skin conditions such as acne, wounds, burn, eczema, sun damage to the skin and premature aging.

3. These characteristics may provide glow and luster to the skin.

4. Turmeric may also receive your skin by bringing out its natural glow.[4, 26, 3]

Melting Point: 1830C

Identification test

1. Powdered drug which sulphuric acid gives crimson colour.

2. The aqueous solution of turmeric which boric acid gives reddish brown colour which on addition of alkali changes to greenish blue.

3. Which acetic anhydride and concentrated sulphuric acid, it gives violet colour. When this test is observe under ultraviolet light, red fluorescence is seen.[5]

4. AMLA

Fig. Amla[27]

Botanical Name: Emblica Officinalis

Family: Euphorbiace

Synonyms: Indian gooseberry, Amla

Biological Source: This consists of dried, as well as fresh fruits of the plant Emblica Officinalis Gaerth.

Geographical Source: It is a small- or medium-sized tree found in all deciduous forests of India. It is also found in Sri Lanka and Myanmar.

Chemical Constituents: E. Officinalis contains chemical constituents including

1.Tannins, mucic acid, amino acids, alkaloids, flavone glycosides, phenolic glycosides, flavonol glycosides, phenolic acids, sesquiterpenoids, norsesquiterpenoids and carbohydrates.

2. Fruit juice of E. Officinalis contains the highest amount of vitamin C (478.56 mg/100 ml) as compared to other fruits, such as apple, lime, and pome-granate.

Medicinal Uses

1. It helps in regulating blood sugar. It is very powerful anti-inflammatory herb, a wonderful antioxidant and a natural Source of Vitamin C.

2. Amla is powerful food for the brain and helps lower cholesterol. Amla also helps maintain the functioning of the liver, increases haemoglobin, red blood cell count.

3. It is useful for Cough, Bronchitis, and Asthma. Amla cleanses the mouth, strengthens the teeth. Its decoction is used in hyperacidity and with honey as an anthelmintic.

4. It help Improve intelligence and memory power. Triphala and Brahmarasayana are other classic medicine in which Amla is being used since time immemorial.[9,10]

Melting Point: 133 °C

Identification test

1. Alcoholic or aqueous extract of the drug gives blue colour which ferric chloride solution.

2. Adding gelatin or sodium chloride in aqueous extract produce milky white colour.

3. In the aqueous extract of amla at lead acetate to remove precipitate by filtration. To the filtrate add solution of 2:6 dichlorophenol – indophenol; the colour disappears.[5]

5. PAPAYA

Fig. Papaya[28]

Botanical Name: Carica papaya

Family: caricaceae

Synonyms: Papita, Papaya, Papaw

Biological source: Papain is the dried purified latex of the unripe fruit of paw-paw, Carica papaya Linn.

Geographical Source: Formerly from southern Mexico (particularly Chiapas and Veracruz), Central America, and northern South America, the papaya is now cultivated in most tropical countries. In cultivation, it grows rapidly, fruiting within three years. It is, however, highly frost-sensitive, limiting its production to tropical climates. Temperatures below 29° Fahrenheit are greatly harmful if not fatal.

Chemical Constituents

1. Protein, fat, fibre, carbohydrates, minerals: calcium, phosphorous, iron, vitamin C, thiamine, riboflavin, niacin, and Carotene, amino acids, citric and malic acids (green fruits)
2. Volatile compounds: linalool, benzyl isothiocyanate, cis and trans 2, 6-dimethyl-3, 6 epoxy-7 octen-2-ol
3. Alkaloid, α; carpaine, benzyl- -D glucoside, 2-phenylethyl - -D- glycosides, 4-hydroxy-phenyl-2 ethyl- -D-glucoside and four isomeric malonated benzyl- -D-glycosides.

Medicinal Uses

1. It is used as Anthelmintic, relieves dyspepsia, cure diarrhoea, pain of burns and topical use, bleeding haemorrhoids, stomachic, whooping cough.
2. Papaya can be used as a diuretic (the roots and leaves), anthelmintic (the Leave and seed) and to treat bilious Conditions (the fruit).
3. Parts of the plant are also used to combat dyspepsia and other digestive disorders and a liquid portion has been used to reduce enlarged tonsils.
4. The juice is used for warts, cancers, tumours, corns and skin defects while the root is said to tumours of the uterus.[11]

- **This crude drug is identified by following description**

Flowers-Papayas are dioecious. The flowers are five-parted and highly dimorphic; the male flowers have the stamens fused to the petals. The female flowers have a superior ovary and five contorted petals loosely connected at the base. Male and female flowers are borne in the leaf axils; the male flowers are in multiflowered dichasia, and the female ones are in few-

flowered dichasia.[citation needed] The pollen grains are elongated and approximately 35 microns in length.[citation needed] The flowers are sweet-scented, open at night, and wind- or insect-pollinated.

Fruit-The fruit is a large berry about 15–45 cm (6–17+3⁄4 in) long and 10–30 cm (4–11+3⁄4 in) in diameter:88.It is ripe when it feels soft (as soft as a ripe avocado or softer), its skin has attained an amber to orange hue and along the walls of the large central cavity are attached numerous black seed.

Table Containing

Basic Identity of Crude Drug Use In Multipurpose Cream

Srno	Crude Drug Name	Synonym	Chemical Test	Uses
1	Aloe Vera	Kumari	Bromine test: freshly prepared bromine solution is added to small quantity of filtrate. The test gives pale yellow precipitate of tetrabromalin.	antibacterial, antiviral, and antiseptic,
2	Neem	Neem	This crude drug is characterized by its microscopic and organoleptic character.	Leprosy, eye disorders, bloody nose, intestinal worms, stomach upset,
3	Turmeric	Indian saffron curcuma	The aqueous solution of turmeric which boric acid gives reddish brown colour which on addition of alkali changes to greenish blue.	Acne, wounds, burn, eczema, sun damage to the skin and premature aging.
4	Amla	Indian gooseberry	The aqueous solution of turmeric which boric acid gives reddish brown colour which on addition of alkali changes to greenish blue	Acne, wounds, burn, eczema, sun damage to the skin and premature aging.
5	Papaya	Papita	This crude drug is characterized by its microscopic and organoleptic character.	Anthelmintic, relieves dyspepsia, cure diarrhoea, pain of burns and topical use, bleeding haemorrhoids, stomachic, whooping cough

MULTIPURPOSE CREAM

The Word “cosmetic” arises from Greek word “Kosmesticos” which mean to the adorn. Herbal Cream is defined as, are the preparation used to Enhance the human appearance .More herbal Ingredient are used to provide define cosmetic Benefits only is called as “herbal cosmetic: “The Demand of herbal medicines is increasing Rapidly due their lack of side

effect.[4] According to the Drug and Cosmetic Act, cosmetic is defined as articles intended to be rubbed, poured, sprinkled or sprayed on introduced into or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness or altering the appearance.[30]

The word "cosmetics" actually stems from its use in Ancient Rome. They were typically produced by female slaves known as "cosmetae" which is where the Word "cosmetics" stemmed from.[13] Fruits, leaves, roots, bark oil extracted from seeds and other various parts of plant have been used directly or in derived form for the preparation of herbal cosmetics that are usually free from Side Effects hence herbal cosmetics are also known as "Natural" and "Ayurvedic "cosmetics.

Some commonly beautifying agents such as creams, face packs and scrubs, hair oils, hair hues, shampoos, hair conditioner, lipstick, blush, eyeliners, Mascaras foundation and eyeshadow, perfumes and Scent cleanser etc. are formulated with different added substance is like oils waxes normal hues common aromas and part of plants like leaves, blooms by particular innovative techniques.

Some of the well-known Herbs like aloe Vera, Amla, turmeric, Sandalwood, Tulsi, Neem, Ginger, cucumber peach, Apricot and many others which are you traditionally for various herbal preparation in the form of creams, lotion, face packs, soaps and other form possesses remarkable antiseptic antibacterial antioxidant protective, soothing, nourishing and beautifying effect on skin.[14]

Multipurpose cream act nourishing or night cream when applied excessively, they function as hand creams when applied sparingly thus they are called Multipurpose Cream. These were also known as sports cream, as they were used by sportsman in skiing and outdoor activities.[15] Multipurpose Cream is a white viscous used to protect skin from dryness and humidity by providing adequate moisturizing effect.[16]

Cream is a polyherbal Formulation that consists of extracts of Aloe barbadensis, Ocimum sanctum, Azadirachta indica, Curcuma longa, Cedro oil, Myristicafragrans, Oliumrosae(Rose Oil), Orange Oil, Prunusdulcis, Ocimum sanctum. These herbs have been selected on the basis of a traditional system and scientific justification with modern uses. A herbal lotion that

Can give effective protection to skin and free from any Toxicity or toxic residue or any irritation when regularly used And should also be cosmetically acceptable.[17]

Creams are semi-solid preparations containing one or more medicinal agents dissolved or dispersed in either a water-in-oil emulsion or an Oil-in-water emulsion or in another type of water-washable base. Cream can be classified as oil in water and water in oil emulsion. It is applied on surface or superficial part of skin and its advantage is to remain for a longer duration of time on site of application.

The main purpose of our work is to formulate an herbal cream which can produce multipurpose effect, like moisturizer, reduce acne and irritation, reduce skin conditions like psoriasis, eczema, wrinkles, dry skin, rashes etc. and also add glow to the skin. Aloe Vera, Neem and Turmeric, these three herbal ingredients are used in our preparation. Aloe Vera acts as anti-ageing, anti-inflammatory, moisturizer, reduce acne and pimples. Neem is used to promote wound healing, relieves skin dryness, itching and redness and it is also used to reduce pigmentation and scar. Turmeric is used as antibacterial and adds glow to the face.[18]

Advantages

1. The herbal cream are natural free from all the Harmful synthetic chemical which generally May turn out to be lethal to the skin.
2. Safe to use, they are hypo-allergenic, tested and proven by dermatologists to be safe to Use anytime, anywhere.
3. Compatible with all type of skin like as oily Skin, dry skin.
4. The natural ingredient used assure no side Effect.
5. They easily available and found in large Variety due their lack of side effect.
6. Natural Products. As the name suggests that Herbal cosmetics are natural.
7. Suitable For All Skin Types.
8. Not Tested On Animals.
9. No Side Effects.
10. Wide Selection.
11. Budget-Friendly.
12. Safe and Effective to Use. In comparison with other beauty products flooded in the market, Natural cosmetics are safest to use and Effective as well.

DISADVANTAGES

1. Herbal cream have slower effect as compare to.
2. Allopathic dosage form also it require long term therapy.
3. They are difficult to hide taste and odour.
4. Manufacturing process are time consuming and Complicated Skin allergies due to certain compounds in the cream.
5. Skin reactions like itching, peeling, irritation, reddening etc. might happen.
6. The benefits of cold cream are quite simple.

MECHANISM OF ACTION

The role of the skin's outer layer is primarily to protect the body against bacteria, microbes, and other environmental stress. It is therefore not very good at absorbing substances – quite the opposite in fact.

- The cream's active ingredients simply sit on the dead skin cells in a greasy film. Very little cream actually penetrates deeper into the skin. And some of is absorbed by the skin actually includes undesirable additives that are often found in many creams.[12]
- Water from deeper epidermal layers moves upward to hydrate stratum corneum cells and is then lost to evaporation. Stratum corneum is an active membrane, where loss of intercellular lipids, forming the bilayers will result in water barrier formation damage leading to dry skin. The structure of the stratum corneum is the pivotal factor in skin water flux, retention and overall moisturizing level.
- Corneocytes are the stratum corneum's physical barrier, contributing to elasticity when hydrated. Stratum corneum's lipid bilayers act as moisture barrier and despite preventing many chemicals entry; they are also means of entry for most topically applied substances.
- The natural moisturizing factor within corneocytes is a mix of hygroscopic molecules, which maintain and hold Corneocytes hydration. Fifty percent of natural moisturizing factors are amino acids originating from keratinocyte protein filaggrin, the remaining are salts, including lactates, urea, and electrolytes. Dry skin signs appear when Corneocytes accumulate on skin surface and lose its continuity.
- Multipurpose cream improves skin hydration and increases stratum corneum water content by directly providing water to the skin from their water phase and increasing occlusion to reduce trans-epidermal water loss, it also covers small skin fissures, provides a soothing protective film and protects skin from friction.

- Multipurpose cream application smooth's skin surface by filling spaces between partially desquamated skin flakes and restores the ability of the intercellular lipid bilayers to absorb, retain and redistribute water.[19]

Basic Formula For Multipurpose Cream

Sr.No	Ingredients	Percentage (%)
1.	Active ingredient	25%
2.	Excipient	55%
3.	Vehicle	Q.S

- **Active ingredient:** Aloe Vera, Neem Turmeric, Tulsi, Amla
- **Excipients**: Bees wax, Liquid paraffin, Borax Methylparaben
- **Vehicle**: Distilled Water, Rose water

Method of Preparation

1. Heat liquid paraffin and beeswax in a borosilicate glass beaker at 75 ℃ and maintain that heating temperature. (Oil phase).

2. In another beaker, dissolve borax, Methylparaben in distilled water and heat this beaker to 75 ℃ to dissolve borax and Methylparaben and to get a clear solution. (Aqueous phase). Then slowly add this aqueous phase to heated oily phase.

3. Then add a measured amount of aloe powdered. Then 1g Tulsi leaf powder+10 ml dimethyl sulfoxide was taken in a volumetric flask and then shaken for 3 d on REMI RSB-12 mechanical shaker. Then the solution was heated on water bath at 80 to 100 for few minutes and then concentrated up to 5 ml and filtered using a muslin cloth to remove impurities.

4.Then the filtrate or the filter product in which a clear solution or clear extract of Tulsi leaves was used in the preparation Vera gel, Neem extract, and Tulsi extract and stir vigorously until it forms a smooth cream. Then add few drops of rose oil as a fragrance.

5. Put this cream on the slab and add few drops of distilled water if necessary and mix the cream in a geometric manner on the slab to give a smooth texture to the cream and to mix all the ingredients properly. This method is called as slab technique or extemporaneous method of preparation of cream.[20]

EVALUATION PARAMETERS OF MULTIPURPOSE CREAM

1) Physical Properties: The Cream was observed for color, odour and appearance.

2) Test for Thermal Stability: Thermal Stability of the formulation was determined by the humidity chamber controlled at 60-70% RH (Relative humidity) and 37 ±1oC.

3) Determination of pH: 5 ± 0.01g of the Cream was weighed accurately in a 100ml beaker. 45ml of water was added & dispersed the Cream in it. The pH of the Suspension was determined at 27oC using the pH meter.

4) Stability studies: To study the drug and formulation stability, the stability Studies were carried out as per ICH Guidelines. The cream filled in bottle and Kept in humidity chamber maintained at 30 ± 2°C/ 65 ± 5 % RH and 40 ± 2°C / 75 ± 5 % RH for two months. At the end of Studies, samples were analysed for the Physical properties and viscosity.

5) Patch Test: About 1-3gm of material to be tested was placed on a piece of fabric or funnel and applied to the sensitive part of the skin e.g. skin behind ears. The Cosmetic to be tested was applied to an Area of 1m2 of the skin. Control patches were also applied. The site of patch is Inspected after 24 hrs.

6) Spread ability studies: An important Criteria for semisolids is that it possess good Spreadability. Spreadability of the Cream, that is the ability of a cream to evenly spread on the skin, plays an important role in the administration of a Standard dose of a medicated formulation to the skin and the efficacy of a topical Therapy. The therapeutic efficacy of a Formulation also depends on its spreading Value. Spreadability of the formulation was determined by measuring the Spreading diameter of 1g of sample between two horizontal glass plates (10cm X 20cm) after one minute. The standard Weight applied to the upper plate was 25g. The formulation was tested three times.

7) Test for microbial growth in Formulated creams: The formulated Creams were inoculated on the plates of Agar media by streak plate method and a Control was prepared by omitting the Cream. The plates were placed into the Incubator and are incubated at 37 0C for 24 Hours. After the incubation period, plates were taken out and check the microbial Growth by comparing it with the control. The bacteria used for microbial growth Was Escherichia coli.[21]

CONCLUSION

As per the final year syllabus we studies about all the basic step and evaluation parameter used for estimate standard of crude drug formulated in all purpose cream this type of cream containing wide variety of crude drugs which have antiseptic, antibacterial, protective, antiviral therapeutic effect. Hence this cream is safe to use and economical also. It can be used as the provision of a barrier to protect skin.

Multipurpose creams have a variety of applications such as cleansing, beautifying, altering appearance, moisturizing etc. to skin protection against bacterial, fungal infections as well as healing cuts, burns, wounds on the skin.

REFERENCES

1. Dr.Antara Choudhury, as per PCI Regulations Final year B. Pharma text book of Quality Control and Standardization of Herbals, Nirali Prakashan, Page No. 1.1.
2. Basic test for drugs, pharmaceutical substances, medicinal plants materials and dosage form By WHO Health Organization Geneva, 1998; Page No. 1-3.
3. Dr. S. Sathiya, Dr. K. P. Jaiganesh, Dr. T. Sudha Pee Vee, Herbal Drug Technology Theory cum Practical. SEM 6th, Edition, 2020; Page no – 206-207.
4. Kamble Kshitija Shrimant, Dr.Hingane, L.D Bagwan, L .R, Formulation and Evaluation of Multipurpose Herbal creams .May-June 2022, Volume 7, International Journal of Pharmaceutical Research and Application, Page No. 2357.
5. Dr. C. K Kokate, A.P. Purohit, S. B Gokhale. Nirali Prakashan Pharmacognosy, 15 Edition, September 2014; Page No.9.9.
6. Mohammed Ali Pharmacognosy (Pharmacognosy and Plant Cultivation) Volume 2, CBS Publishers and Distributors, First Edition 2008; Page No. 236.
7. I. V Shrinivasa Reddy, and P. Neelima, Neem: A Review on Medicinal Kalpavriksha, International Journal of Economic Plants, 2022; 9(1): Page no -059-063.
8. The Ayurvedic Pharmacopoeia Of India Part 1, Volume 2, First Edition, Government of India Ministry of Health and Family Welfare Department of Indian System of Medicine and Homeopathy New Delhi, Page No. 124-125.
9. Bhavesh C.Variya, Anita K. Bakvania, Sneha. S. Patel, AMLA-A Review for its Phytochemistry, ethno medicinal uses and medicinal potentials with respect to molecular mechanism, Pharmacological Research Volume 2, September 2016; Page No. 180-200.
10. Swetha Dasaroju, Krishna Mohan Gottumulkkala, Current Trends in the Research of Emblica Officinalis (Amla): A Pharmacological Perspective, Jan –Feb 2014; Page No. 150-159, ISSN 0976-044X.
11. Asha Roshan, Navneet – Kumar Verma, Anuba Gupta, A Brief Study of on Carica Papaya – "A Review Article International Journal of Current Trends in Pharmaceutical Research ISCTPR, 2014; 2(4): 540-541.
12. Dr. Pragi Arora, Dr. Varun Arora, A Textbook of Herbal Drug Technology PV Publication, Edition 2009; Page No – 95.

13. Chauhan Lalita, Gupta Shalini, Journal of Drug Delivery and Therapeutic, 13 Aug 2020; Page No-281-289
14. Dr. Kuntal Das, A Textbook of Herbal Drug Technology, Nirali Prakashan Edition, Feb 2020; Page No. 3.2- 3.31.
15. Google / PPT Slide share, Pharmaceutical Creams Bharat Hindu University. December 14, 2015, Time – 10:10pm, Date -8 Feb Page No. 13.
16. PPT Herbal or Natural Cosmetic, V K Vikram Varma, February 19, 2020; Time -10: 32pm, Date – 8 Feb Page no -30.
17. Akash S. Mali, Karekar P, Dr. Yadav, A. v. Formulation and Evaluation of Multipurpose Herbal Cream, Volume 4 issue 11, November 2015, International Journal of Science and Research (IJSR) Page No. 1495-1498.
18. Bhavana Patil, Neha Yadav, Gopal Yadav, "Formulation and Evaluation of Multipurpose Herbal Cream, March 2022,"Journal of Emerging Technologies and Innovative, research, Page No. E311-329.
19. Schandra, Purnamavati, M D Niken Indrastub, Dr.Tatan Saefudin, MD, A Review of "The Role of Moisturizers in adversing kinds of Dermatitis."
20. Nikhil Nitin, Navindgiar K. A. Kamalpurkar Prashant S. Chavan, International Journal Of Current Pharmaceutical Research, Int J Curr Pharm Res, Vol 12, Issue 3, 25-30, ISSN 0975-7066.
21. Ghule Deepali, Upadhye Mohine, Karande Rani, More Smita, Design and Development of Multipurpose Cream 2019, 17 December, Current Trends in Pharmacy and Pharmaceutical Chemistry, Page No. 43-47.
22. https://pixabay.com/images/search/aloe%20vera/
23. https://pixabay.com/images/search/neem/?manual_search=1
24. https://gpatindia.com/neem-oil-biological-sources-morphological-features-chemical-constituents-uses-and-mcq-for-gpat/
25. https://pixabay.com/images/search/turmeric/?manual_search=1
26. www.mccormickscienceinstitute.com.
27. https://pixabay.com/images/search/amla/?manual_search=1
28. https://pixabay.com/images/search/papayas/?manual_search=1
29. https://en.wikipedia.org/wiki/Papaya
30. https://www.filabe.ch/en/blog/how-are-creams-absorbed-skin