

## A Review on Poly-Herbal Lotion; a Self Stable Agent Along With Cooling Effect

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### ABSTRACT:-

Ethanol is used as preservative in most of herbal cosmetic products. But they have lots of side/adverse effect like skin cancer, alcohol abuses has been associated with the development of several skin disorders including psoriasis, discoid eczema and superficial infection. Chronic alcohol abuses also a predisposing factor for necrotizing wound infections, delayed wound healing and cellulitis. The cosmetic industry adopts the needs of consumer seeking to limit the use of preservative and develop of preservative free of self-preservative herbal cosmetics/lotions. The aim of study was a comparison of the antimicrobial activity (aloe-vera gel, turmeric etc.) oil contents (mineral oils, petroleum jelly, glyceryl monostearate etc.) emulsifier agent (glycerin) and preservative (methyl paraben, propyl paraben etc.) using some aromatic agent (sandal wood, and pepper mint oil) that also shows cooling effect also. It can be also used in summer as substitute of regular cold creams which contains synthetic preservative as well as. This shows that tested extract is made up by without alcohol (as a preservative) at the same time giving a guarantee of microbiological purity of the cosmetic under its use and storage.

**KEYWORDS:-** Antimicrobial activity, Herbal extract, Alcohol (ethanol, methanol etc.), Essential oils.

### I. INRODUCTION:-

(1)Cosmetic products are not expected to be aseptic, but they need to be safe for consumer use. Microbiological control of cosmetic products is always of interest to the industry since microbialspoilage can lead to product degradation andworse, human health hazard. Preservatives arechemical antimicrobials used in cosmeticsprimarily to prevent microbial spoilage of theproduct, thereby improving the product shelf life and also to protect consumers from any adversemicrobial infection.(1)

(2)Herbal Cosmetics, here referred as Products, are formulated, using various permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to provide defined cosmetic advantages only, shall be called as "Herbal Cosmetics". The herbal cosmetics are those when natural herbs and their products used for their aromatic value in cosmetic preparation among consumers for herbal products triggered the demand for natural products and natural extracts in cosmetics preparations.

(2)Lotions are liquid preparations meant for external application without friction. They are applied directly to skin with the help of some absorbent material, such as cotton wool or gauze soaked in it. Lotions may be used for local action as cooling, soothing or protective purposes.

(1)Classes of preservatives which are generally usedin personal care products are Parabens, Alcohol,Formaldehyde releasers and Isothiazolinones. Inrecent times all three classes of preservativeshave come under a cloud of suspicion of causingmore harm than good to human health. Althoughdeclared safe for use by the Cosmetic IngredientReview, parabens have been implicated asendocrine disruptor and may increasethe risk of women developing estrogen positivebreast cancer. Formaldehyde releasers likeImidazolidinyl urea and Diazolidinyl urea arethought to cause skin reactions in sensitiveindividuals. Although the Isothiazolinones(Methyl chlorisothiazolinone &Methylisothiazolinone) are considered non – carcinogenic, they have been associated withfrequent causes of contact allergy. They areknown contact sensitizers. Use of certain preservatives which are potentantimicrobial agents as well, may have driven thefixation and spread of certain resistance cassettecollectors (class 1 integrons).Moreindiscriminate use of such preservatives incosmetic products may drive the selection offurther new genetic elements that will aid in thepersistence and spread of antimicrobial resistanceand thereby limits our treatment options formicrobial infections. So it is getting clear

that although chemical preservatives prevent microbial growth, their safety is questioned by a growing segment of consumers. There is a growing interest to develop 'Preservative-free' or 'Self-preserving' cosmetic formulations. Common definition of 'Preservative-free' means that the product does not contain substances that are classified as preservatives according to the cosmetic legislation. The term 'Self-preserving' is more appropriate than 'Preservative-free'. In 'Self-preserving' formulations traditional preservatives are replaced by other cosmetic ingredients which apart from delivering its primary property also exhibits antimicrobial property. They are also termed as 'Multifunctional' ingredients. In an effort to develop 'Self-preserving leave-on skin care cosmetic products, this paper explores the use of multifunctional ingredients and identifies efficacious / synergistic combinations which meet regulatory norms of microbiologically safe product. The leave-on skin care products developed for this study are emulsion based cream, lotion and vanishing cream. (1)

#### ETHANOL-

Ethanol is present in alcoholic drinks (beer, wine spirits) when diluted. It is used as a topical agent to prevent skin infections, in pharmaceutical preparations (e.g. rubbing compounds, lotions, tonics, colognes), cosmetics, and in perfumes. Ethanol may be present in fuels, labeled as ethanol-blended fuels, and is used as an industrial solvent for fats, oils, waxes, resins, and hydrocarbon. It is used to make many chemical compounds, lacquers, plastics and plasticizers, rubber and rubber accelerators, aerosols, mouthwash products, soaps and cleaning preparations, polishes, surface coatings, dyes inks, human and veterinary medicines and as a dehydrating agent.

But symptoms of exposure to ethanol may include irritation to the eyes, skin and nose, drowsiness and headache. Other symptoms may include stupor, nausea, mental excitement or depression, vomiting, flushing and coma. Exposure to high concentrations of ethanol vapours may cause irritation of the eyes, skin and respiratory tract, loss of coordination, sleepiness, narcosis, impaired perception and lack of coordination. It can also cause lowered inhibitions, dizziness, shallow respiration, unconsciousness and death. Ethanol is harmful by ingestion, inhalation or by skin absorption. Repeated contact can dry the skin resulting in the skin cracking, peeling and

itching. Ethanol can depress the central nervous system, the eyes and upper respiratory tract (nose and throat). Ethanol can cause irritation, headache, fatigue and loss of concentration.

Materials and methods:-

For the preparation of self-stable lotion first we collect all the active pharmaceutical ingredients and excipients that are used for the formulation of lotion. Fresh turmeric and Aloe-vera was collected by the garden of our college medicinal plant garden. And more other chemicals were collected from college laboratory- Rungta Institute of Pharmaceutical Sciences and Research, Bilhail Durg (C.G.).

#### INGREDIENTS TABLE:-

S. no.	Name of Ingredient
1.	Bees wax
2.	Borax
3.	Liquid paraffin
4.	Methyl paraben
5.	Propyl paraben
6.	Turmeric
7.	Aloevera
8.	Rose water
9.	Sandal wood
10.	Pepper mint
11.	Distilled water

- **Bees wax:-**

Beeswax (also known as *cera alba*) is a natural wax produced by honey bees of the genus *Apis*. The wax is formed into scales by eight wax-producing glands in the abdominal segments of worker bees, which discard it in or at the hive.



Fig.- 1.1

- **Borax:-**

Borax is a powdery white substance, also known as sodium borate, sodium tetraborate. It is widely used as a household cleaner and a booster for laundry detergent. It's a combination of boron, sodium and oxygen.



Fig.- 1.2

- Liquid paraffin:-**  
 Liquid paraffin is also known as Russian mineral oil is a very highly refined mineral oil used in cosmetics and medicine. Liquid paraffin is used as a moisturizer to treat or prevent dry, rough, scaly, itchy skin and minor skin irritations.



Fig.- 1.3

- Methylparaben:-**  
 Methyl paraben is an anti-fungal agent often used in a variety of cosmetics and personal care products. It is also used as a food preservative and has the E number E218. It is commonly used as a fungicide in *Drosophila* food media at 0.1%.



Fig.- 1.4

- Propyl paraben:-**  
 Propyl paraben is the benzoate ester that is the propyl ester of 4-hydroxybenzoic acid. Preservative typically found in many water-based cosmetics, such as creams, lotions, shampoos and bath products. Also used as a food additive. It has a role as an antifungal agent and an antimicrobial agent.



Fig.- 1.5

- Turmeric:-**  
 Turmeric may be the first known cosmetic as it has been traditionally smeared on the skin by women. It is believed to reduce facial hair growth, reduce acne and improve complexion. Many women in Tamil Nadu still apply turmeric on their face daily before taking bath.

Turmeric is a product of *Curcuma longa*, a rhizomatous herbaceous perennial plant belonging to the ginger family Zingiberaceae, which is native to tropical South Asia. As many as 133 species of *Curcuma* have been identified worldwide.



Fig.- 1.6

- **Aloe vera:-**

Aloe vera is a medicinal plant with antioxidant and antibacterial properties. Aloe vera benefits can include reducing dental plaque, accelerating wound healing, preventing wrinkles, and managing blood sugar.

The biological source of the aloe is dried latex of leaves of it. It is also known as curacao aloe, cape aloe and socotrine aloe. It belongs to the Liliaceae family. The botanical name of Aloe vera is *Aloe barbadensis*.

Aloe vera is considered to be native only to the south-east Arabian Peninsula in the Hajar Mountains in north-eastern Oman and eastern U.A.E.



Fig.- 1.7

- **Rose water:-**

Rose water is perfect for cleaning your skin and removing any impurities that could cause unwanted spots. Because of its gentle nature, it is suitable for people with any skin type – even sensitive skin. Using rose water for face and body cleansing will ensure your skin doesn't become dry and irritated.

Rose oil is extracted from the flowers of *Rosa damascena*. And it belongs to the family of Rosaceae. Rose oil contains citronellol, geraniol,

nerol, linalool, phenyl ethyl alcohol, pinene, limonene and p-cymene.



Fig.- 1.8

- **Sandal wood:-**

Over the years, it has been used as an important cosmetic product. Traditionally, sandalwood is used as an anti-ageing product as it reduces wrinkles, scars, and the darkening of the skin. This is due to its toning, antioxidant, and anti-inflammatory actions. Sandalwood consists of the heartwood of the stems and roots of *Santalum album* Linn. An evergreen small tree of the family Santalaceae. The plant is widely distributed in India and is cultivated under government control in Southern India.



Fig.- 1.9

- **Distilled water:-**

Distilled water is water that has been boiled into vapor and condensed back into liquid in a separate container. Impurities in the original water that do not boil below or near the boiling

point of water remain in the original container. Thus, distilled water is a type of purified water.



Fig.- 1.10

Formulation of Turmeric, Aloe-vera self stable lotion:-

Preparation before the formulation: - (2) Clean and sanitize your work area and all your packaging materials.

It is suggested that you wear gloves, protective clothing and a hair net while preparing this recipe.

#### METHOD OF FORMULATION

##### Formulation method of gel:-

- □ Collect raw material (aloe leaves).
- □ Wash leaf and remove base and tip of the leaf.
- □ Leaf is cut into section (Filleting).
- □ Extract mucilage part of the leaves into mixing jar.
- □ Heat it and add agar agar into the mixing jar.
- □ Grinding/Homogenization of Unpasteurized Juice
- □ Add Vitamin E and Pasteurize the mixer cool the mixer of aloe leaf
- □ Package the produced gel and Store it.

##### Steps Used In Formulation of Gel

- □ Reception of raw materials The Aloe vera leaves after harvesting were preferably transported to the processing place. The leaves should be sound, undamaged, mold/rot free and matured (3-4 years) in order to keep all the active ingredients in full concentration. Filletting operation- It was shown that the aloe gel, once extracted from the leaf, had greater stability than the gel left in the leaf. In order to avoid the decomposition of the biological activity, the filletting operation must be completed within 36 hrs. of harvesting the leaves.
- □ Grinding/homogenization- The major steps in

this process include crushing or grinding. The aloe gel

fillets should be crushed and homogenized using a commercial high speed tissue crusher at room temperature (25°C). And add agar agar into the mixture.

- □ Addition of vitamin E The unpasteurized aloe gel juice was fortified with vitamin E to improve the flavor of Aloe vera gel juice and to stabilize the juice. It is used for its antioxidant activity.
- □ Pasteurization Treatment (at 85-95°C for 1-2 min) is an effective method to avoid the bad flavor and the loss of biological activity of the Aloe vera gel. Flash cooling- After pasteurization, the juice is flash cooled to 5°C or below within 10-15 sec. This is a crucial step to preserve biological activity of the Aloe vera gel.
- □ Storage Relative humidity and temperature are two most important environmental parameters that affect product quality.
- □ Formulation method of lotion:-
- □ Measure the quantity of above formulated gel. Weigh all other ingredient used in formulation.
- □ Take a large glass or plastic mixing bowl.
- □ Add measured out gel of the aloe vera into the mixing bowl.
- □ Then add other ingredients of the formulation one by one like turmeric, rosewater, sandal wood, and essential oil with measured quantity.
- □ Mix all the ingredient of the bowl in vigorously manner. Herbal lotion was prepared.

##### PROCEDURE:

1. Take grated bees wax, add liquid paraffin to it and keep on water bath for melting of all ingredients in double boiler.
2. Take a blender pour a above melted ingredients and take a beaker and add methyl paraben and propyl paraben and borax and mix it well.
3. Refrigerate for 15 minutes.
4. Again blend and add aloe vera gel and turmeric.
5. Again blend and in last add rose water, sandal wood and pepper mint.
6. Blend again and keep the lotion in air tight container.(2)

**RESULT:-**(3)The herbal gel and body lotion was prepared and subjected to evaluation of various parameters. The herbal formulation was greenish in color. The pH was throughout the study is between 5- 5.5 which lies in the normal pH range of the skin and the gel did not produce any irritation upon application to the skin. We were formulated three formulations of self stable lotion F1, F2&F3, F2 is

best formulation after the observation of evaluation test. The stability test was carried out for six months and results revealed that the all lotions showed better stability. The preparation was stable under normal storage conditions. These results indicated that the herbal lotion had no adverse effects on the topical area. It is showed this herbal preparation is useful in inflammation, and anti-aging.

✓ Appearance The appearance of the formulation was lotion type.

✓ Color- The color of the formulation was observed greenish.

✓ Odour The odour was aromatic.

✓ PH The PH of the formulation was found to be approx. 7.8 both in the PH paper & in digital PH meter.

✓ Spreadability- The formulation was easily spreadable.

✓ After fill The formulation was emollient in nature & the after fill was so soft.

✓ Types of smear The formulation was good in forming film on the skin.

✓ Irritancy test The formulation was non-irritable & non allergic on the skin.

✓ Ease of removal The formulation was easily removed from the skin by using water & the time of the removal was 25-30sec.

✓ Test for microbial growth No microbial growth is observed.

#### EVALUATION TEST:

##### (2)1. Homogeneity

The formulation were tested for homogeneity by visual appearance and by touch.

##### 2. Appearance

The appearance of the lotion

##### 3. After feel

Emolliency, slipperiness and amount of residue left after the application of fixed amount of lotion was checked.

##### 4. Acid Value

Take 10gm of substance dissolve in accurately weighed in 50ml mixture of equal volume of alcohol and solvent ether. The flask was connected reflux condenser and slowly heated, until sample was dissolved completely. To this 1ml of phenolphthalein added and titrated with 0.1N NaOH, until faintly pink colour appears after shaking for 30sec.

Acid Value= $n \times 5.61/w$

n= number of ml of NaOH required

w= weight of substance

##### 5. pH measurement

The pH meter was calibrated using standard buffer solution. About 0.5gm of clotion was weighed and dissolved in 50ml of distilled water and its pH was measured using digital pH meter.

##### 6. Irritancy test

Mark an area (1 sq. cm) on the left hand dorsal surface. The lotion was applied to the specified area and time was noted. Irritancy, erythema, edema, was checked if any for regular intervals upto 24hrs and reported.

##### 7. Viscosity

Viscosity of the formulation was determined was brookfield or oswald viscometer at 100 RPM, using spindle no. 7 at temp 25oC. The determinations were carried out in triplicate and the average of three reading was recorded.

##### 8. Accelerated stability testing

Accelerated stability testing of prepared lotion was conducted for 2 most stable formulations at room temp, studied for 7 days. The formulations were placed at 40oC + 1oC for 20 days. Both formulations were kept at room temp and elevated temp and observed on 0th, 5th, 10th, 15th and 20th day for any change in color, phase separation etc.

##### 9. Subjective Properties

Consistency, feel on application and irritation parameters are determined.

##### 10. Spreadability

Two glass slides of standard dimensions (20 × 5cm) were selected. The formulation was over one of the slide. The other slide placed on the top of the lotion such a that the formulation sandwiched between the two slides in an area occupied by a distance of 7.5 cm, alongside 100 gm weight was placed uniformly to form a thin layer. The weight was removed and the excess of lotion adhering to the slides was scrapped off. The two slides in a position were fixed to stand (45° angle) without slightest disturbance and in such a way that only the lower slide held firmly by the opposite fangs of the clamps allowing the upper slide to slip off freely by the force of weight tied to it. 60 gm of weight was tied to the upper slide carefully. The time taken for the upper slide to travel the distance of 5 cm and separate away from the lower slide

under the direction of weight was noted. The experiment repeated for 3 times and the mean taken for three such dimensions was calculated. The results were recorded.

The Spread ability is calculated by using formula:

$$S = M \times L/T$$

Where,

S= Spread ability,

L= Length of glass slide,

M= Weight tied to the upper slide and

T= Time.

### 11. Type of emulsion test

Dye solubility and dilution test was conducted to determine the type of emulsion formed. A portion of lotion was applied on the forearms of 6 volunteers and left for 20 minutes. After 20 minutes any kind of irritation if occurred was noted.

### 13. Washability Test

A portion of lotion was applied over the skin of hand and allowed to flow under the force of flowing tap water for 10 minutes. The time when the lotion completely removed was noted.

### 14. In vitro permeation studies

In vitro permeation studies of TRA lotions across rabbit skin were carried out using two-chambered Franz-type diffusion cells (manufactured "in house") having a receptor phase of ~5 ml, 2 and a diffusional area of ~0.788 cm<sup>2</sup>. Adult rabbit skin was used for permeation studies at 37 ± 0.5 C. Abdominal full thickness skin of male White New Zealand rabbit (3 - 4 kg weight) was carefully excised after sacrificing the rabbit. Subcutaneous fats and other extraneous tissues adhering to the dermis were completely removed and trimmed with forceps and scissor. The skin was cleaned with phosphate buffered saline (PBS) at pH 7.4 and stored in 500 ml normal saline in a 0 refrigerator (18 – 20 C) The skin was used within one week of excision. Sheets of the skin were cut to appropriate sizes 2 (~ 1 cm in diameter) and soaked overnight in the receptor solution (PBS). The membrane was then placed between the two compartments of the diffusion cells with epidermis side facing the donor compartment while the dermal side was bathed with PBS at pH 7.4

(receptor fluid). The donor compartment was filled with PBS at pH 7.4 ± 0.1.

This pH is close to that of human skin. The receptor fluid was stirred with a magnetic stirring bar at 500 rpm, keeping the temperature at 37 ± 0.5 C by means of a water jacket. Care was exercised to remove any bubbles between the underside of the skin and the solution in the receiver compartment. Vacuum grease was used to produce a leak-proof seal between the membrane and the two compartments of the diffusion cell, i.e., donor and receptor. Ultrasonic bath. To avoid evaporation from the compartments, the cell arm and donor compartment were covered with a parafilm. Constant mixing of the receptor phase was obtained with a magnetic stirrer placed in the receptor compartment. The diffusion cells were placed on a stirring-bed immersed in a water bath at 37 ± 0.05 C, to maintain the temperature of membrane surface. After 24 hours, both chambers were cleared of PBS and the receptor compartment was immediately refilled with pre-thermostated PBS, while the skin remained intact. The donor compartment was charged with 1 ml of the lotion (test formulation). At time intervals of 5, 15, 30, 60, 90, 120, 180, 240, 360 and 480 min, 0.2 ml sample was drawn, using a micro-pipette, from receptor solution followed by addition of same volume of pre-thermostated receptor solution to maintain sink conditions. The samples were analyzed spectrophotometrically at 271 nm using UV/Vis spectrophotometer to obtain the amount of TRA permeated through rabbit skin after diluting with 1.8 ml PBS. Since skin shows great sample-to-sample permeability variations, each of these analyses was conducted in pentaplicate (n = 5). To construct a calibration curve, 500 mg of TRA was dissolved in PBS (10 ml) in 100 ml volumetric flask and the final volume made up to 100 ml by adding PBS to prepare stock solution. From this solution, dilutions of 10, 20, 30, 40, 50, 60, 70, and 80 µg/ml were prepared. The resultant dilutions were analyzed spectrophotometrically for UV absorbance' maximum UV absorbance of TRA was found at 271 nm. The linear equation of the constructed calibration curve was y = 0.022x – 2.0.021 and correlation coefficient (R) of 0.998. Steady-state flux was determined from the slope of the linear portion of the cumulative amount of permeation (Q) versus time (t) plot. The input rate of TRA permeating across rabbit skin was determined as in Eq

$$\text{Input rate} = K_p \times C \times A \dots \dots \dots$$

Where, K<sub>p</sub> is permeability coefficient,

C is donor amount ( $\mu\text{g}$ ), i.e., amount of drug in the donor compartment and  
 A is the Franz cell area of 2 permeation ( $\sim 0.788 \text{ cm}$ ).

Enhancement ratio (ER) was calculated by dividing the flux of the test formulation by the flux of control formulation.

### 15. Statistical analysis

The receptor and donor compartments were filled with PBS at  $\text{pH } 7.4 \pm 0.1$ . To remove air bubbles and preclude the development of air pockets in the receptor phase, PBS was degassed in an The results are expressed as mean  $\pm$  standard deviation (SD,  $n = 5$ ). Statistically significant differences between various permeation data were determined using F-test, Fisher's least significant difference (LSD), analysis of variance (ANOVA) and multiplier range tests at 95 % confidence level.

### 16. Preference Test:

The parameters of preference tests based on sensory evaluation were a scent, color, and sensation on the skin. The level of preference was assessed using a numerical scale, i.e. 5 = like extremely, 4 = like, 3 = neutral, 2 = dislike, 1 = dislike extremely.

### 17. Test for thermal stability

Thermal stability of the formulation was determined by the humidity chamber controlled at 60- 70% RH and  $37 \pm 1^\circ\text{C}$ .

### 18. Determination of total fatty matter

2g of the sample was weighed in a conical flask, added 25ml of dil. HCL (1% v/v) & refluxed. Poured this into the separating funnel and 50ml of ethyl ether were added in to it. The separating

funnel was shaken well until two layers were separated. The aqueous layer was separated out and added 50ml portion of ether twice. All the ether extracts were combined and filter through the filter paper containing dried sodium sulphate on it. Distilled off the ether (filtrate) & dried the material remaining in the flask at temperature  $60 \pm 2^\circ\text{C}$  to constant mass.

### Calculation

$$\text{Total Fatty Matter\%} = 100 \times \frac{M1}{M2}$$

Where, M1 = mass in gram of residue

M2 = mass in gram of material taken for test

### 19. Determination of water content

10g of the material was weighed and transferred it into the flask. 200ml of toluene and few pieces of pumicestone was added and connected the apparatus with condenser. The flask was heated until toluene was begin to boil and refluxed. When the H2O was distilled over source of heat was removed.

### Calculation

$$\text{Water \% by mass} = \frac{V \times D}{M} \times 100$$

Where, V = volume of water in ml at room temperature collecting in receiving tube

D = density of water at room temperature

M = Mass in gm of the material taken for the test

### 20. 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 1sq.m. of the skin. Control patches (of similar cosmetic of known brand) were also applied. The site of patch is inspected after 24 hrs. As there was no reaction the test was repeated three times. As no reaction was observed on third application, the person may be taken as not hypersensitive.

### EVALUATION TABLE:-

S. no.	Test	observation		
		f1	f2	f3
1.	Appearance	Lotion type	Lotion type	Lotion type
2.	Color	Greenish	Faint greenish	Faint greenish
3.	Odour	Aromatic	Aromatic	Aromatic
4.	Ph	5	5.5	5
5.	Spreadability	Easily spreadable	Easily spreadable	Easily spreadable
6.	Irritancy test	Non-irritable & non allergic	Non-irritable & non allergic	Non-irritable & non allergic



		the skin	the skin	the skin
7.	Removal test	Easily removed from the skin by using water	Easily removed from the skin by using water	Easily removed from the skin by using water
8.	Stability test	No microbial growth is observed 4 months	No microbial growth is observed 3 months	No microbial growth is observed 2 months



Fig. – Determination of PH



Fig.- Determination of Spreadability

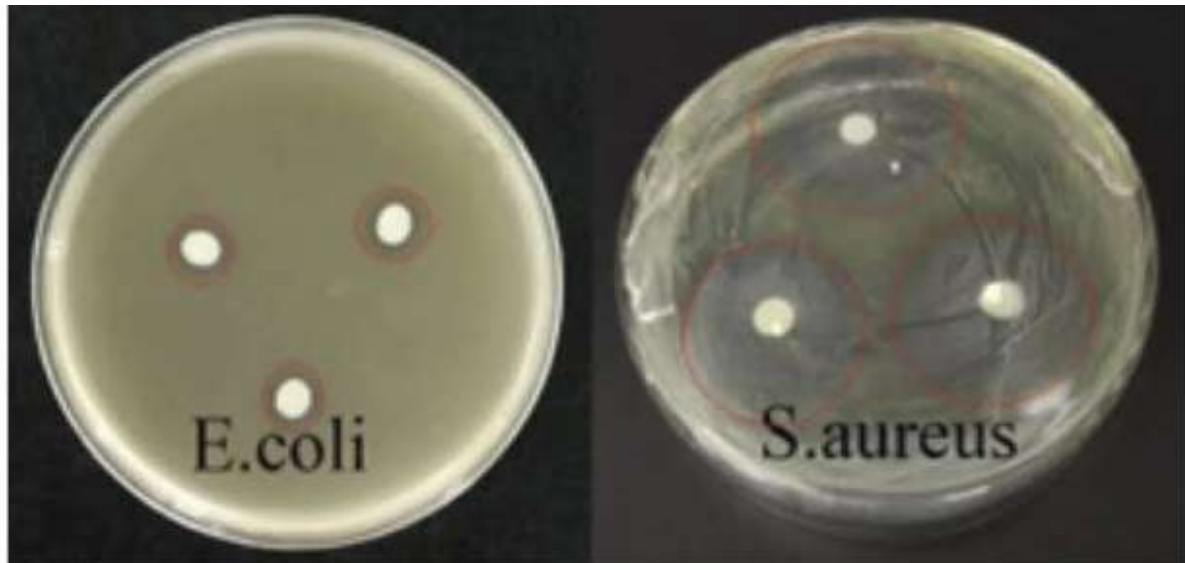


Fig.- Determination of microbial contamination

### (3) BENEFITS OF LOTIONS:-

- Re-hydrate dried skin.
- Replenish extra dry or rough spots on the skin.
- Feel and smell good.
- Help yourself relax.
- Soften the roughest parts of your body.
- Make your skin glow.

- **Re-hydrate dried skin:-**

People who work in harsh climates often apply body lotion on a regular basis, perhaps even daily. Skin that is chapped or dried from wind, cold, or heat can be hard to treat with regular cosmetics. Some people have sensitive skin. No matter which type of climate they live in, their skin can become dry and irritated easily, sometime even from indoor heat. Quality body lotion, applied after each shower or bath, can help to seal moisture deep in the skin to keep it hydrated and supple. It may not be a bad idea to keep a bottled of your favorite scented body lotion on hand for an after- bath application.

- **Replenish extra dry or rough spots on the skin:-**

Even if your normal skin type is oily or normal, you might have rough areas on your body, like around the elbows or knees that could benefit from skin lotion applications after a bath or at bedtime. With regular use, a replenishing lotion can ease rough skin and make it as smooth and silky as the rest of your body.

- **Smooth calluses:-**

If you are on your feet quite a bit you may have developed rough calluses that are painful and un-slightly. A moist body lotion can make these areas supple and help you to remove the dead skin easier than if you attempted it without lotion. If you calluses appear discolored, swollen, or have red streaks running from them, check with your doctor rather than trying to remove them yourself.

- **Feel and smell good:-**

People love the feel of creamy lotion on their tired limb or torso. Enjoy the relaxing sensation of lotion applied to your feet, legs, or arms. Specialty stores, department stores, and gift shops carry many different scents of body lotion to choose from. There are as many lotion types as you have moisturizing needs, so take advantage of the wealth of scents and textures to find one that suits your personality and needs.

- **Help yourself relax:-**

Even if your skin is in great shape and does not need to be moisturized with lotion, try a body massage with scented lotion on the hands. You can even get lotion that heats up during application to add sensory warmth to parts of your body to which it is applied. The feel of gentle softness on your skin rotating in firm, steady massage movements can remove stress, subdue pain, and enhance endorphins to make ou feel great.

- **Soften the roughest part of your body:-**  
Do your legs dry out after shaving? How about rough hands or toughened heel? No matter your age or lifestyle, body lotion can do wonders to help you relax and appreciate the simple comforts of life. You may want to keep a bottle of body lotion in the kitchen for your hands after doing dishes or in the bathroom after a quick wash-up. There are dozens of uses for body lotion when you think about all the ways it can be applied to make your skin moist, supple, and sweet smelling.
- **Make your skin glow:-**  
Now you can buy some kinds of lotion that add glimmer and shimmer to your skin tone. Brightening qualities embedded in lotion to show up as tiny sparkling flecks on the skin when applied. Some cosmetic lotions can brighten the skin to remove dull, dead flakes and rejuvenate underlying tissues.(3)

#### **ADVANTAGES / Benefits of self stable cosmetics-**

- Preservative-free implies that a product is completely free of preservatives.
- Many products that are labeled as such aren't truly preservative-free because they often contain ingredients with self-preserving properties.
- The benefits of self-preserving or preservative-free products is that they are often less likely to irritate sensitive skin than products that use synthetic or chemical preservative.
- In addition, the natural anti-oxidants that help products stay fresh also help keep skin nourished and glowing.
- When it comes to products with good bacteria, Morelli points to recent research shows the anti-inflammatory skin care benefits of probiotics.
- One of the woensides of self-preserving product is that they will not have as long of a shelf life as ones with synthetic preservatives.
- To get the most out of your self-preserving products, you can help prolong their lifespan by keeping them out of direct sunlight and not storing them in warm, humid conditions. That means not leaving them on the vanity or in the shower.

#### **II. DISCUSSION:-**

(1)While it is extremely essential to ensure protection of personal care products from microbial spoilage, selecting the right preservative system

can be a tough challenge to the formulator. The cosmetic scientist is restricted by legislation to a limited number of chemistries, and further by the level at which these chemistries are allowed to be used in the product. Once a routinely used and rarely questioned ingredient in cosmetic formulations, preservatives are now being viewed with skepticism by consumers. To look beyond current technologies, formulators are seeking opportunities to apply new preservation principles to develop 'Preservative – free' or 'Self – preserving' formulas. The use of 'Hurdle Technology' is taking center stage in this endeavor. This technology combines a number of preservative factors in order to prevent microbial growth. The different hurdles may result in synergistic rather than additive effects. There are many cosmetically approved ingredients which have anti microbial properties. By a careful selection of these ingredients, it is possible to reduce or eliminate the use of regular preservatives and develop self preserving formulas. These ingredients are termed as 'Multi-functional actives', as they are molecules with more than one beneficial effect on the skin. Some such multifunctional ingredients include glycols, fatty acids and their monoestersphenethyl alcohol; Ethyl Hexyl Glycerine; phospholipids, etc.

(3)The herbal gel and body lotion was prepared and subjected to evaluation of various parameters. The herbal formulation was greenish in color. The pH was throughout the study is between 5-5.5 which lies in the normal pH range of the skin and the gel did not produce any irritation upon application to the skin. I was formulated three formulations of herbal shampoo F1, F2&F3, F2 is best formulation after the observation of evaluation test. The stability test was carried out for six months and results revealed that the all lotions showed better stability. The preparation was stable under normal storage conditions.

These results indicated that the herbal lotion had no adverse effects on the topical area. It is showed this herbal preparation is useful in inflammation, and anti-aging.

(4)Poly herbal skin care lotion containing turmeric, and aloe-vera extract was formulated and for evaluation organoleptic properties, Physicochemical Parameters were being analysed. All the parameters shown results in acceptance range. Further this formulation can be compared with marketed one for better efficacy.

### III. CONCLUSION:-

(1)The intelligent combination of multifunctional ingredients using synergism and boosting effects can be a solution to protect products from microbial contamination, are friendly to the skin and accepted by consumers. This approach to product preservation helps to eliminate usage of preservatives which may cause skin irritation or contact sensitivity.

In conclusion, our study shows that it is possible to develop 'self-preserving' cosmetic skin care products without compromising on product aesthetics and product sensorial. These products can withstand multiple microbial challenges. They exhibit similar efficacy as that of products made with preservatives. However, one must be clear that these products can be self preserving only when GMP conditions are maintained while manufacturing, as like any product made with preservatives, these self preserving formulations will also not be able to control overwhelming contamination by microbes.(1)

(4)Herbal lotions evaluation tests refer to studies & experiments undertaken during production & which occasionally ought to be undertaken post-production by regulatory agencies & researchers. In this study a formulation herbal lotion was tested & evaluated in terms of their Organoleptic properties (appearance, colour, odour) & Physiological parameters (PH,spread-ability, after-fill, types of smear, ease of removal, irritancy test, test for microbial growth). The results indicate the formulation met the requirements of the standards, which means they are chemically sound.

(3)The present work focus on the herbal extracts Provide nutrients necessary for the healthy skin. There are numerous herbs available naturally having different uses in cosmetic preparations for skincare as antioxidants. The present study revealed that herbal cosmetic are very safe and does not produce any toxic and adverse reactions compare to marketed cosmetics products. Herbal Lotion we will avoid skin problems.

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