ISSN 0976-7126

INTERNATIONAL JOURNAL OF PHARMACY & LIFE SCIENCES

A review on herbs: as therapeutics and cosmetics

Pandey Shivanand
Smt. R. B. P. M. Pharmacy College, Atkot-360040, Rajkot, Gujarat, India.

Abstract

The review provides a herbal formulation useful as a therapeutic and cosmetic applications for the treatment of general skin disorders, said composition comprising at least two or more plant extracts in the form of oil or powder or mixtures thereof, the said plants extracts being selected from the group consisting of *Gymnena sylvestrae* water extract 3 to 6wt.%; *Tridax procumbens* water extract 3 to 6wt.%; its methanolic extract 4 to 6wt.%, *Allium sativum* oil hexane extract 1 to 3wt.%; dried juice of *Aloe vera* 2 to 6wt.%; Gum Olibanum powder in the natural form 4 to 7wt.%; Gum Olibanum resinoid or its organic extract 3 to 8wt.%; and resinoid free Gum Olibanum meal 5 to 10 wt.%., optionally, including any drug having anti-inflammatory and wound healing property or mixture thereof, the said drug being selected from the group consisting of Disclofenac sodium 1-3wt.%, Salicylic acid 1 to 4 wt. %, Piroxicam 1 to 2 wt. % , Turmeric powder 0.1 to 1 wt. %, a base containing aqueous cream or a gel containing carbopol ranging between 1 to 4 wt. % , emulsifying ointment ranging between 20 to 40 wt. %, preservatives ranging between 0.05 -0.3 % and a humecant ranging between 1-4 wt. %, and remaining water to make 100 wt. %.

Keywords: *Allium sativum,* oilhexane, Anti-inflammatory, Olibanum resinoid, Carbopol

Introduction

A herbal formulation useful as a therapeutic and cosmetic applications for the treatment of general skin disorders comprising the following ingredients: (a) at least two plant extracts in the form of oil or powder or mixtures thereof, the said plant extracts being selected from the group consisting of *Gymnena sylvestrae* water extract 3 to 6 wt%; *Tridax procumbens* water extract 3 to 6 wt%; its methanolic extract 4 to 6 wt%, *Allium sativum* oilhexane extract 1 to 3 wt %; dried juice of Aloe vera 2 to 6 wt %; Gum *Olibanum powder* in the natural form 4 to 7 wt%; *Gum Olibanum* resinoid or its organic extract 3 to 8 wt % and resinoid free.[1-3]

Herbal for cosmetic applications: An anti allergic herbal formulation comprising the following ingredients: a) plant extracts in the form of powder or oil of medicinal plants, being *Tridax procumbens* water extract 3 to 6 wt % and gum Olibanum powder in the natural form 4 to 7 %; b) a gel base containing carbopol ranging between 1 to 4 wt % or an aqueous cream base containing emulsifying ointment ranging between 20 to 40 wt %, preservatives ranging between 0.05-0.3% and a humecant ranging between 1-4 wt %c) humectants selected from propylene glycol ranging between 1 to 3 wt % and Glycerin ranging between 1 to 4 wt % and d) the balancebeingwatertomake100wt%.[1]

A herbal formulation useful for cosmetic applications as moisturizer comprising the following ingredients: a) at least two plant extracts in the form of powder or oil of medicinal plants, being selected from Gymnena sylvestrae water extract 3 to 6 wt %. *Aloe vera* (dried juice) 2 to 6 wt %, *Tridax procumbens* water extract 3 to 6 wt %, *Gum Oilbanum* meal and *Gum Olibanum* powder; b) optionally any drug having anti-inflammatory and wound healing property or mixture thereof, the said drug being selected from group consisting of Diclofenac sodium 1-3 wt %, salicylic acid 1 to 4 wt %, Piroxicam 1 to 2 wt %, Turmeric powder 0.1 to 1 wt %c) a gel base containing carbopol ranging between 1 to 4 wt % or an aqueous cream base containing emulsifying ointment ranging between 20 to 40 wt%.[2]

*** Corresponding Author:**
Tel: (02821) 288-323
Email: dot.shivanand@gmail.com

ISSN 0976-7126

A herbal formulation useful for therapeutic and cosmetic applications particularly discoloration comprising the following ingredients: a) plant extracts in the form of powder or oil of medicinal plants, being *Gum Olibanum* resinoid, *Tridax procumbens* water extract 3 to 6 wt %, *Gum Olibanum* powder; b) a gel base containing carbopol ranging between 1 to 4 wt % or an aqueous cream base containing emulsifying ointment ranging between 20 to 40 wt % preservatives ranging between 0.05-0.3 % and a humectant ranging between 1-4 %c) humectants selected from propylene glycol ranging between I to 3 wt %, and Glycerine ranging between 1 to 4 wt %; and d) the balance being water to make 100 wt %.[1]

The present reviwe relates to an herbal cream formulation useful for therapeutic and cosmetic applications: cracked heels, dry skin disorder, skin allergies, and depigmentation and anti fungal activity. In the formulation of the present invention, the herbs that are used are known to possess anti-inflammatory, antiallergic and wound healing properties. The formulation may also be useful in treating chopped hands, hyperkeratosis and minor cuts and burn wounds.

Herbal formulation for therapeutic and cosmetic applications particularly discoloration comprising the following ingredients:

(a) Plant extracts in the form of powder or oil of medicinal plants, being *Gum Olibanum* resinoid, *Tridax procumbens* water extract 3 to 6 wt. %, *Gum Olibanum* powder.

(b) a gel base containing carbopol ranging between 1 to 4 wt.%, or an aqueous cream base containing emulsifying ointment ranging between 20 to 40 wt. %, preservatives ranging between 0.05 -0.3% and a humecant ranging between 1-4 wt. %.

(c) humectants selected from propylene glycol ranging between 1 to 3wt. %, and Glycerine ranging between 1 to 4 wt. %.

(d) The balance being water to make 100 wt. %.

Advantages: once the cracks on heels are cured, the recurrence of cracks is minimum, compared to commercially available products in the market. The present formulations have moisturizing effect on skin and hence can be used for dry skin disorders in cosmetic therapy. The present formulations provide excellent protection from darkening of skin due to minor cuts, bums, wounds and pimples.[3]

Quality Control of Herbal Drugs & cosmetics: The choice of the extracting solvent depends on the nature of the compounds involved, and might be deduced from the traditional uses. For example, when an herbal drug is used to make a tea, the hot water extractable matter, expressed as milligrams per gram of air-dried material, may serve this purpose. A special form of assay is the determination of essential oils by steam distillation. When the active constituents (e.g. sennosides in *Senna*) or markers (e.g. alkydamides in *Echinacea*) are known, a vast array of modern chemical analytical methods such as ultraviolet/visible spectroscopy (UV/VIS), TLC, HPLC, GC, mass spectrometry (MS), or a combination of GC and MS (GC/MS), can be employed. .Several problems not applicable to synthetic drugs influence the quality of herbal dugs.[4, 5]

- Herbal drugs are usually mixtures of many constituents.
- The active principle(s) is (are), in most cases unknown.
- Selective analytical methods or reference compounds may not be available commercially.
- Plant materials are chemically and naturally variable.
- Chemo-varieties and chemo cultivars exist.
- The source and quality of the raw material are variable.

The methods of harvesting, drying, storage, transportation, and processing (for Example, mode of extraction and polarity of the extracting solvent, instability of constituents, etc.) have an effect. Strict guidelines have to be followed for the successful production of a quality herbal drug. Among them are proper botanical identification, phytochemal screening, and standardization. Quality control and the standardization of herbal cosmetics involve several steps. The source and quality of raw materials, good agricultural practices and manufacturing processes are certainly essential steps for the Quality control of herbal cosmetics and play a pivotal role in guaranteeing the quality And stability of herbal preparations[6, 7] the quality of a plant product is determined by the prevailing conditions during growth, and accepted Good Agricultural Practices (GAP) can control this. These include seed

ISSN 0976-7126

selection, growth conditions, and use of fertilizers, harvesting, drying and storage. In fact, GAP procedures are, and will be, an integral part of quality control. Factors such as the use of fresh plants, age and part of plant collected, period, time and method of collection, temperature of processing, exposure to light, availability of water, nutrients, drying, packing, transportation of raw material and storage, can greatly affect the quality, and hence the therapeutic value of herbal medicines.

Apart from these criteria, factors such as the method of extraction, contamination with microorganisms, heavy metals, and pesticides can alter the quality, safety, and efficacy of herbal drugs. Using cultivated plants under controlled conditions instead of those collected from the wild can minimize most of these factors sometimes the active principles are destroyed by enzymes processes that continue for long periods from collection to marketing, resulting in a variation of composition. Thus proper standardization and quality control of both the raw material and the herbal preparations should be conducted.[8, 9]

Standardization involves adjusting the herbal drug preparation to a defined content of a constituent or a group of substances with known therapeutic activity by adding excipients or by mixing herbal drugs or herbal drug preparations. Botanical extracts made directly from crude plant material show substantial variation in composition, quality, and therapeutic effects. Standardized extracts are high-quality extracts containing consistent levels of specified compounds, and they are subjected to rigorous quality controls during all phases of the growing, harvesting, and manufacturing processes. No regulatory definition exists for standardization of dietary supplements. As a result, the term "standardization" may mean many different things. Some manufacturers use the term standardization incorrectly to refer to uniform manufacturing practices; following a recipe is not sufficient for a product to be called standardized. Therefore, the presence of the word "standardized" on a supplement label does not necessarily indicate product quality. When the active principles are unknown, marker substance(s) should be established for analytical purposes and standardization. Marker substances are chemically defined constituents of an herbal drug that are important for the quality of the finished product. Ideally, the chemical markers chosen would also be the compounds that are responsible for the botanical's effects in the body. There are two types of standardization. In the first category, "true" standardization, a definite Phytochemical or group of constituents is known to have activity. Ginkgo with its 26% ginkgo flavones and 6% terpenes is a classic example. These products are highly concentrated and no longer represent the whole herb, and are now considered as phytopharmaceuticals. In many cases they are vastly more effective than the whole herb. However the process may result in the loss of efficacy and the potential for adverse effects and herb–drug interactions may increase.[10, 6, and 8]The other type of standardization is based on manufacturers guaranteeing the presence.of a certain percentage of marker compounds; these are not indicators of therapeutic activity or quality of the herb. In the case of herbal drug preparations, the production and primary processing of the medicinal plant or herbal drug has a direct influence on the quality of the active pharmaceutical ingredients (APIs). Due to the inherent complexity of naturally growing medicinal plants and the limited availability of simple analytical techniques. To identify and characterize the active constituents solely by chemical or biological means, there is a need for an adequate quality assurance system.This assurance is also required during cultivation, harvesting, primary processing, handling, storage, packaging, and distribution. Deterioration and contamination through adulteration, especially microbial contamination, can occur at any one of these stages. It is extremely important to establish good agricultural, harvesting, and manufacturing practices for herbal starting materials in order to minimize this undesirable factors.[11, 12]

In this regard producers, processors, and traders of medicinal plants or herbal drugs have an obligation and a role to play. The manufacturers and suppliers of herbal products should adhere to quality control standards and good manufacture practices' health by carrying out remarket reviews of all drugs before they are authorized for sale. The products available in the market are analyzed regularly to ensure that they are free of unsafe ingredients and that the products actually contain the ingredients indicated on the labels.[11, 12]

Marketing Analysis of Herbal Cosmetics: There are several major steps in herbal cosmetic products manufacturing starting from herbal crop planting to herbal product manufacturing and marketing. Chemical engineers are involved once the herb is harvested where quick preprocessing and correct storage is required. Preprocessing involves reducing the size of the herb through chopping and grinding to prepare for processing while good storage method ensures that the active Phytochemical are maintained before processing. [13]

ISSN 0976-7126

Processing is a critical aspect of herbal production, especially due to the low yield of extracts. Processing methods are usually based on traditional methods such as high pressure water extraction for herbs which are traditionally boiled as decoctions. New innovative methods such as Supercritical Fluid Extraction (SFE) where supercritical fluids such as carbon dioxide under high pressure are utilized to produce herbal extracts need to be developed to produce herbal products of higher yield, lower operating costs, and faster production times. Packaging and sale follow processing.[14]

Good Manufacturing Practice (GMP) is a code of practice used by the medical and health related industries including the pharmaceutical industry in an effort to maintain the highest standards of quality in the development, manufacture and control of medicinal products. In Malaysia, the GMP certification is issued by National Pharmaceutical Control Bureau (NPCB), which is issued as an annual Manufacturing License to which it can be revoked at any time if the facilities are found not to meet the standards of GMP. Herbal cosmetics products can only be sold by manufacturers who utilize GMP as it ensures that the herbal product safety and purity. In addition, manufacturers intending to export their products must ensure that their target markets accept their GMP practices.[15]

A key issue in manufacturing herbal products and medicines is standardization. Standardization is the process of producing herbal extracts or Phytochemical in which product potency is guaranteed through consistency in active compound content level. This process requires high knowledge in Phytochemical analysis and process technology to ensure the quality assurance required. The increase of value in herbal products as increased processing and standardization is carried out.

In addition, as the overall Phytochemical yield of herbal extracts are between 2-5 %, it is important to develop expertise in optimizing the process as process profitability can be increased through: [15]

- Reduction of utilities usage
- Increase in Phytochemical yield
- Reduction of extraction solvents
- Reduction of processing time

Many processes within the phytochemical industry are similar or identical to unit operations within chemical engineering. Shows the similarities in terms on unit operations and Phytochemical processing methods between traditional chemical engineering and Phytochemical processing.

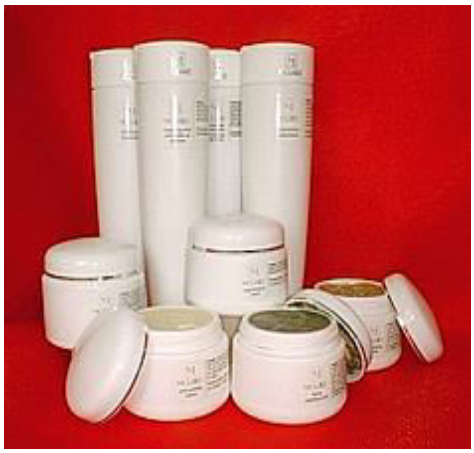
It can be seen that many areas of chemical engineering would be applicable to the phytochemical industry. In terms of basic knowledge Chemical engineers will need to focus on acquiring more knowledge on:-

- Organic Chemistry – Natural products chemistry in particular
- Analytical Methods – such as HPLC, LC-MS, NMR

Separation Technology – such as SFE, natural product isolation and purification as much research in Phytochemical processing has been done by chemists in terms of chemical isolation and pharmacists in terms of bioactivity, there is a need for basic chemical engineering oriented research to be done.

There are almost no data available on the physical and chemical properties of the Phytochemical or herbal medium to be processed, hence, process design and optimization is currently a trial and error procedure. There is also a strong need to build up scale up knowledge, either through a theoretical basis or pilot plant experiments, as frequently only laboratory data is available.[13, 16] Among key problems that must be addressed include developing process design knowledge for herbal extraction. Currently, much herbal extraction design is done based on knowledge from food technologists. Often these design methods do not take into account chemical thermodynamic data or design methods. Process models are built are not easily replicated or utilized as many are based on surface response methodologies which are only applicable to the equipment investigated. More first principle modeling methods need to be developed to model, optimizes, and scale up herbal extraction processes1[14, 17]

ISSN 0976-7126



Heena

Brown

Chest Nut Brown

Natural Black

Burgandy

Heena Based Hair Colour

Summary and Conclusion

Herbal Cosmetics, are referred as Products, are formulated, using various permissible cosmetic ingredients. Herbal cosmetic also known as “natural cosmetics. The various ingredients which are used for herbal cosmetics are aloe Vera gel, cucumber extaract, honey, lemon oil etc. In the formulation of herbal cosmetics mainly herbal skin care products, hair care, lip care, eye care, herbal soaps, perfumes. &oils are included. Quality control is a term that referred to processes involved in maintaining the quality and validity of manufactured product. In the evaluation of herbal cosmetics we includes micro scopical evaluation, determination of ash, heavy metals, foreign matter and also includes micro skeptical contamination etc.The marketing analysis of all herbal cosmetic products is very essential to be carried out .various marketed herbal cosmetic products are available for skin, hairs, lips, eyes etc. herbal cosmetics are more beneficial in cosmetic & therapeutic application then other synthetic cosmetics.

The herbal cosmetics are defined as which are having various herbal ingredients and herbal extracts. The best thing of the herbal cosmetics is that it is purely made by the herbs and shrubs. Herbal cosmetics are also known as “natural” and “ayuvedic” cosmetics. Herbal cosmetics are in existence from when the men started to use the cosmetic products. So they are oldest products used by mankind. Some common cosmetics include creams, face

ISSN 0976-7126

packs, scrubs, hair oils, hair colours, shampoos, hair conditioners, lipsticks, blush-on or rouge as it is sometimes known, eyeliners, mascaras, foundations and eye shadow, perfumes and fragrance, soaps, etc. The formulation of all these cosmetic products includes addition of various natural additives like oils, waxes, natural colours, natural fragrances and parts of plants like leaves, flowers etc by specific formulation methods. 'Quality control for efficacy and safety of herbal cosmetic products is of paramount importance. So quality control test must be carried out for herbal cosmetics. Microscopic evaluation is indispensable in the initial identification of herbs. And other evaluations methods for identifying the presence of ash, foreign matters, contaminants, heavy metals should be carried out for safe and good quality cosmetic products. There are several major steps in herbal cosmetic products manufacturing starting from herbal crop planting to herbal product manufacturing and marketing. Marketing analysis of herbal products requires modern techniques. Some well known marketed products are for eg.turmeric skin cream by vicco India ltd.for hair shampoos and hair conditioners by Himalaya Company India etc. An herbal formulation useful as therapeutic and cosmetic applications for the treatment of general skin disorders. And also for beautifying and attractiveness of skin, hair, lips, eyes etc.

Acknowledgement

The author would like to thank our college member like librarian, computer experts, and all other persons who help us in direct or indirect way to whom we fail to notice. My sincere thanks to almighty God for their continuous monitoring of our work till its completion.

References

1. Prakash Vaman Rao Diwan (C/O Indian Inst. of Chem. Tech., Hyderabad, 500007,IN)
2. Bhamidipalli Subrahmanya Sitaramam (C/O Indian Inst. of Chem. Tech., Hyderabad-500007,IN)
3. Sistla Ramakrishna (C/O Indian Inst. of Chem. Tech., Hyderabad-500007, IN)
4. Schier W., Sachsa B. and Schultze, W. (1994). Dtsch Apoth. Ztg.
5. EMEA. 91998). Quality of Herbal Medicinal Products. Guidelines. European Agency for the Evaluation of Medicinal Products (EMEA), London.
6. WHO (1998). Basic Tests for Drugs, Pharmaceutical Substances, Medicinal Plant Materials and Dosage Forms. World Health Organization, Geneva.
7. WHO (2002).General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine. World Health Organization, Geneva.
8. EMEA. (2005).Guidelines on Quality of Herbal Medicinal Products/Traditional Medicinal Products, EMEA/CVMP/814OO Review. European Agency for the Evaluation of Medicinal Products (EMEA), London.
9. www .ayurvedic-herbal-products.com/herbal-extracts.html
10. Baur R.. (1998). Drug Inf. J.
11. WHO (1992).Quality Control Methods for Medicinal Plant Materials. World Health Organization, Geneva.
12. De Smet. P.A.G.M. (1999). Drug Inf. J.
13. Adenan M. I. (2003). Malaysian herbs and herbal products. In A Two and Half Day course of Herbal and Phytochemical Processing, CEPP short course notes. Chemical Engineering Pilot Plant, UTM, Skudai. January 7 -9 .
14. Ahmed R. S. and Sharma S. B. (1997). Biochemical Studies on Combined Effects of Garlic (*Allium sativum* Linn) and Ginger (*Zingiber official* Rosc.) in Albino Rats. Indian J. Experimental Biology.
15. Arif M. T. (2002). Keynote address: Traditional/Complimentary Medicine in the Malaysian Healthcare System. 4th International Conference for Traditional / Complimentary Medicine, Sunway Convention Centre, Kuala Lumpur, 14th October.
16. Puteh M. (2003). In A Two and Half Day course of Herbal and Phytochemical Processing, CEPP short course notes. Chemical Engineering Pilot Plant, UTM Skudai. January 7-9.
17. Wazir S. K. (2003). Promoting the herbal industry in Malaysia: The Malaysia Herbal Corporation Initiative. In A Two and Half Day course of Herbal and Phytochemical Processing, CEPP short course notes. Chemical Engineering Pilot Plant, UTM Skudai. January 7 -9.