

AN APPROACH IN SKIN CARE AND AGING: IN AYURVEDA

*Dr. NidhiSoni, **Dr. S. K. Tiwari, #Dr. Ruby Rani Agarwal,

*PG Scholar, **Asst Professor, #Professor

Dept of Rog Nidan, Rishikul Campus, UttarakhandAyurved University, Haridwar

ABSTRACT

Beauty is the desire of every entity to give pleasure to the sense. It is not always related to women rather men are more beauty consciousness in present era. Ayurveda deals with all the aspects of human life. It never isolates the involvement of mental and spiritual well being from the concept of beauty. Beauty is not only a source of joy but gives confidence and proud in some extent. About Skin, it is the basic element of the external appearance. Beauty is generally depended on the type and texture of the skin one has. Beside it beauty is also depend in other factors like hair falling, hair graying, any type of scar and wrinkle free skin etc. It is essential for the preservation, restoration or best owing of bodily beauty and also in the surgical correction of disfigured physical defects. Beautiful and glowing skin of person gives perceptual experience of satisfaction. In Ayurvedic science many herbal drugs has been prescribed for beautification of skin, teeth, nails and hair deals in a very specific way like-Haridra, Manjistha, Sariva, Chandana, Amalaki, Ghritkumari, Babul, Lavanga, Shikakai, Ritha, Bhringaraj etc. etc. Charak Samhita classified cosmetics drugs as Varnya, Kushthaghna, Kandughna, Vayasthapak, Udardaprashamana etc. and many alopam (poultice) are described in Susruta Samhita and AshtangaHrudaya. Daily regimen of an individual has a special role to improve and maintain beauty. Panchakarma therapy are employed for beautification of skin – the marker of overall condition of individual. Rasayana therapy are also employed for beautification of skin as per Ayurveda.

INTRODUCTION

Ayurveda relates to every aspect of the mind, body and soul. It consider the beauty as an intimate part of the human personality. It is not only the science of medicine but it is the soul of leading healthy life¹. The beauty of nature can have a profound effect upon our senses, indirectly on our skin also. It is not only a source of joy but gives confidence and proud in some extent. Ancient Acharyas like *AbhijnanaShakuntalam* and *Meghadootam* of Kalidasa and many mythological epics encompass the reference of cosmetics like: *Tilak, Kajal, Alita and Agar* that were used as body decorative and to create beauty spots that era ruled by Gods and their deities. In aspect of the skin, healthy skin is mirror of the healthy body. The skin is considered as a protective covering for more delicate & functionally sophisticated internal viscera². The Ayurvedic beauty

is in the surrounding of our nature. Indians are skillfully use it, in daily and seasonal regimen like vegetables, fruit, spices, herbals, precious stones, metals and minerals which are elixir for skin care and delay aging. The concept of using herbs and minerals for beautification and delay ageing is well defined in Ayurvedic text. In Ayurveda, skin care and delay aging or rejuvenation has described very systematically; the measures to maintain it, attain it, and also to enhance it through proper diet and nutrition, serenity of mind, and other specific measures to take care of different aspects of beauty. Ayurvedic science also believes that the serenity and contentment of true beautiful face is the direct reflection of *Ojas* which is the by-product of a healthy, efficient, contented physiology³. Ayurveda gives emphasis on lifestyle modifications such as following daily and seasonal regimens. These include guidelines about eating right food, at the right time,

in right way, based on the seasons and one's constitution; regularizing bedtime rituals, practicing meditation, exercises, maintaining purity of mind and soul^{4,5}. Diet and lifestyle are two main things that can help achieve good health and beauty. These are help for being healthy skin and delay aging.

CONCEPT OF TWAK (SKIN) AND JARA JANAYA VIKAR (AGING DISORDER) IN AYURVEDIC COSMETOLOGY

Skin care is one of the most important components of natural beauty, no matter what your age, skin type or skin tone. Skin is are mirror of an individual's personality⁶. Skin (*Twak*) gives clue to ones *Ayurvedic* constitution (*Dosha*). This is usually understood by the type of skin one has either it is *Vatika*, *Paitika*, and *Kaphaja*. *Acharya Sushruta* described the process of formation of *Twak* in the developing foetus. He state that after fertilization of ovum *Twak* develops just like a cream on the surface of milk in the uterus during the course of development of *Garbha*, differentiation of the layers of the skin takes place and is produced by all three *Doshas*, particularly by the *Pitta* *Dosha* (*Bhrajaka* and *Ranjaka* *Pitta*)². So involvement of *Paitika* *Doshais* very important in skin care and delay aging. *Ayurvedic* herbal medicines act as nutri-cosmetics which nourish the tissues and micro channels of the body which are *Srotas*. They improve circulation, thereby revitalizing the tissues. In *Ayurveda* there are many product they delay ageing (*Jara*) disorder which are due to forming of free radical and tissue degeneration, use by *Rasayan* therapy. One of the most important reasons for the increased use of *Ayurvedic* Cosmetology is that this system can clearly bring out a clear glowing skin with inner happiness, relaxation and without causing any harmful effect.

Ayurvedic Classics mentioned some of the specific points for enhancement of different aspects of Beauty. There are several herbal drugs in some *mahakashaya* mentioned in *Charak Samhita* related to beautification in *Ayurveda* of which following are described in brief in table no.1:

SKIN CARE AND DELAY AGING MANAGEMENT THROUGH AYURVEDA:

Charak Samhita classified some herbal drugs as *Varnya*, *Kusthaghna*, *Kandughna*, *Vayasthapak*, *Udardaprashamana*, and *Keshya*, etc. Many *alepam* (poultice) *Pradeha*, *upnaha*, *anjana*, *taila* are described in *Susruta Samhita* and *Astangahrudaya* in the context of *twakroga*. The very common medicines are *Kungkumaditaila*, *Dashngalepam*, *Chandanadilepam*, *Dashanasamskarchurna*, *Nilibringarajtaila*, and *Himasagartaila*, etc. are very well established medicine in *Ayurveda*. Sesame Oil is used as a base in many oil in *Ayurveda*. It contains *Lignan* compounds called *Sesamin* and *Sesamolin*, which are biologically active. These compounds enhance oxidative stability of the oil. They have potential to be used as anti oxidant compounds as well as having a moisturising effect. Buttermilk and goat's milk powders traditionally used in Indian face mask preparations have soothing and emollient properties. They also contain vitamin A, B6, B12 and E. They make beneficial alternatives to chemical bases and emollients. *Shikakai* is a traditional herb used in hair shampoos. The material is extracted from the *Shikakai* pods and *Shikakai* nuts of the *Acacia Concinnashrub*. The pods are rich in *Saponins* and make a mild detergent, which has a neutral pH. *Aritha* powder, extracted from *Soapnuts* (*Sapindus Pericarp*) also contains *Saponins*, which acts as a foaming agent. It was used as soap in *Ayurvedic* tradition. The oils also maintain integrity of cosmetic products and could be used as a base instead of petroleum and plastic derivatives. There are significant evidences already generated for *Ayurveda* skin care in vitiligo, psoriasis, eczema and acne vulgaris.^{7,8}

Table no. 1:

Action	Herbal drug along with Uses
1. <i>Varnya</i> ⁹ (complexion promotive)	<p>1. <i>Raktachandan (Petrocarpus santalinus)</i> - Natural toner and skin rejuvenator, Anti-Inflammatory, Anti-septic, & Anti allergic</p> <p>2. <i>Lodhra (Symplocococus racemosa)</i> - Glowing Skin, blood purify, Leucoderma, Leprosy, Psoriasis & Inflammation.</p> <p>3. <i>Manjishtha (Rubiocordifolia)</i> - blood purify, skin diseases, improves skin complexion.</p> <p>4. <i>Usheer (Vetiveriazizanioides)</i> - Anti-Inflammatory, Anti-septic, dryness and cracking of skin.</p> <p>5. <i>Svetachandana (Santalum album)</i> - Improves the skin complexion, relieves the itching, burning and redness of the skin.</p> <p>6. <i>KumKum (Crocus sativus)</i> - Improves complexion, useful in hyper pigmented spots.</p> <p>7. <i>Punnaga (Calophyllum inophyllum)</i> - skin rejuvenator, skin diseases like acne, acne scars, psoriasis, eczema, dermatitis.</p>
2. <i>Tarunyapitika (Pimples)</i> ¹⁰	<p>1. <i>Lodhra (Symplocococus racemosa)</i> - Glowing Skin, blood purify, Anti-bacterial.</p> <p>2. <i>Sarshapa (Brassica nigra)</i> - Anti-bacterial, Antifungal, Anti-viral, Anti-Inflammatory.</p> <p>3. <i>Vacha (Acorus calamus)</i> - Anti-bacterial, improve speech, memory and intelligence.</p>
3. <i>Kushthahara</i> ¹¹	<p>1. <i>Ela (Elatteriacardamomum)</i> - Anti-microbial, Anti-ulcer, Anti-Allergy properties.</p> <p>2. <i>Kushtha (Saussurealappa)</i> - Anti-viral, Antibacterial, Anti-fungal & Anti-allergy.</p> <p>3. <i>Daruharidra (Berberis aristata)</i> - Anti-bacterial, Anti-fungal, Anti-viral, Anti-Inflammatory & Anti Tumor.</p> <p>4. <i>Chitrak (Plumbago zeylanica)</i> - Anti-fungal, Anti Inflammatory & Anti-worm infection.</p> <p>5. <i>Vidanga (Emblicaribes)</i> - Anti-Worm infection, Anti-fungal, Anti-Bacterial.</p> <p>6. <i>Haritaki (Terminalia chebula)</i> - Anti-Bacterial, Anti-fungal & Anti-septic.</p>
4. <i>Kesya (Hair Care)</i> ¹²	<p>1. <i>Bhringaraj (Eclipta alba)</i> - Improves quality of hair, Rejuvenating and Anti aging.</p> <p>2. <i>Hastidantamasi (Ash of elephant ivory)</i> - Improves hair length, strength and texture.</p> <p>3. <i>Narikela (Cocos nucifera)</i> - Hair care, Anti-fungal and Anti-bacterial properties.</p> <p>4. <i>Gokshur (Tribulusterrestris)</i> - Control hair fall</p> <p>5. <i>Til (Sesamum indicum)</i> - Hair and skin care.</p>
5. <i>Kesha Krushnakarak (Hair blackening)</i> ¹³	<p>1. <i>Indravaruni (Citrus scolocynthis)</i> - Prevent greying of hairs and as an anti-dandruff agent.</p> <p>2. <i>Bhringaraj (Eclipta alba)</i> - Hair growth, darkening of the hair and makes them lustrous and shiny.</p>

	<p>3. Gunja (Abrus precatorius) - Prevent greying of hairs.</p> <p>4. Shikakai (Acacia concinna) - Hair growth, darkening of the hair.</p> <p>5. Ritha (Sapindustrifolius) - Prevent greying of hairs and makes them lustrous and shiny.</p> <p>6. Nilini (Indigoferatinctoria) - Hair growth, darkening of the hair.</p> <p>7. Amalaki (Emblia officinalis) - Prevent greying of hairs and as an anti-dandruff agent and makes them lustrous and shiny.</p>
7. Foot Care	<p>1. Ginger or Garlic (Zingiber officinale Roscoe): Soak feet in a bucket of warm water containing either a few pods of crushed garlic or crushed ginger. Add to this a little alcohol. Soak feet for 10 minutes.</p> <p>2. Neem (Azadirachta indica) and turmeric (Curcuma longa) paste: Take a few Neem leaves and add to them a tablespoon of turmeric powder. Add a little water and put it into a mixer to form a thick paste.</p> <p>3. Soaked foot in Luke warm water with salt¹⁴.</p>
8. Nails care	Sunflower seeds, sesame seeds, nuts, nail cream with almond oil and honey can be prepared and left overnight ¹⁴ .
9. Deodorants (Gandha Dravya) (for fragrance and to avoid foul body odour)	<p>1. Svetachandana (Santalum album) - Deodorants, Various skin disorders, , relieves the itching, burning and redness of the skin.</p> <p>2. Lavender (Lavandula angustifolia) - Soaps, cosmetics, perfumes and decorations.</p> <p>3. Kumkuma (Crocus sativus) - Improves complexion, hyperpigmented spots.</p> <p>4. Distilled products of Rose, Jasmine (Mogra) etc. (applied in the form of paste or Perfumes over the body)¹⁴</p>
10. Vayasthapana (Anti-aging): (By using Vayasthapak Mahakashayas described by Acharya Charak)	<p>1. Haritaki (Terminalia chebula)- Anti-oxidants, Astringent, Anti-fungal & Anti-septic.</p> <p>2. Amalaki (Emblia officinalis)- Anti oxidants, Anti Allergic properties.</p> <p>3. Guduchi (Tinospora cordifolia) - Anti oxidants, Anti-microbial activity.</p> <p>4. Bibhitaki (Terminalia belerica)- Anti-Bacterial, Anti-Oxidant, Anti-Allergy Properties.</p> <p>5. Nagbala (Sidaveronicaefolia)- Aphrodisiac, Rejuvenative effects.</p> <p>6. Vidanga (Emblia caribea)- Anti-aging, Anti-fungal, Anti-Bacterial.</p> <p>7. Pippali (Piper longum)- Anti-aging, Anti-microbial activity.</p>

Some Miscellaneous single herbal products List commonly used in cosmetics in table no. 2:

Table no. 2:

A. Medicinal Plants used as Moisturizers, Skin Tonics & Anti-Aging	
1. Aloe vera	Moisturizer, Sunscreen & Emollient
2. Calendula officinalis	Wound healing
3. Cichorium intybus	Skin blemishes
4. Curcuma longa	Antiseptic, Antibacterial, Improves complexion
5. Glycyrrhiza glabra	Skin whitening
6. Ocimum sanctum	Anti-aging, Antibacterial & Antiseptic
7. Rubiacordifolia	Wound healing & Anti-aging
8. Triticum sativum	Antioxidant, Skin nourisher, anti-wrinkle

B. Sun Screen:	
1. Aloe vera	Moisturizer
2. Suteicum sativum	Antioxidant
C. Sun Tan:	
Cyperus rotundus and Moringa oleifera	Sun tanning
D. Astringent	
1. Mesua ferrea	Strong Astringent
2. Terminalia chebula (<i>Haritaki</i>)	Astringent, Antibacterial, Antifungal & Antiseptic
E. Dental Care	
1. Azadirachta indica (<i>Neem</i>)	Toothache, Antibacterial, Dental carries
2. Acacia Arabica	Swelling, Bleeding gums & Syphilitic infections
3. Barleria prionitis	Toothache, Bleeding gums & strengthens teeth
4. Mimosa pudica	Astringent, keep gums healthy
5. Syzygium aromaticum	Local anesthetic, relieves toothache
6. Symplocos racemosa	Strengthen gums and teeth
F. Dermatological Applications	
1. Allium sativum	Antifungal, Antiseptic, Tonic
3. Azadirachta indica	Potent Antibacterial
4. Celastrus paniculata	Wounds healing, Eczema
5. Nigella sativa	Antibacterial, Leucoderma
6. Psoralea corylifolia	Leucoderma, Leprosy, Psoriasis & Inflammation
G. Hair Care	
1. Aloe Vera	Cleanser & Revitalizers
2. Azadirachta indica	Reduces hair loss, Anti-dandruff
3. Bacopa monnieri	Hair tonic, Promotes hair growth
4. Centella asiatica	Darkening of hair
5. Eclipta alba	Reduces premature greying of hair, Alopecia
6. Emblica officinalis	Toner, Anti-dandruff, Protects & reduces hair loss
7. Hibiscus rosasinensis	Natural Hair dye, Prevent hair fall, Anti-dandruff
8. Hedychium spicatum	Promotes hair growth
9. Rosmarinus officinalis	Nourishes, Softens & restores the hair shafts
10. Triticum sativum	Provides nourishment, lubrication & luster
11. Terminalia bellerica	Prevents graying of hair
12. Sesamum indicum	Promotes hair growth, blackens the hair

Some Ayurvedic therapeutic procedure about removal of toxins agent by *Panchakarma* table no. 3:

Table no. 3:

1. Shodhanachikitsa
<ul style="list-style-type: none"> If <i>doshas</i> are vitiated in large amount in body and disease is chronic condition then <i>Shodhanachikitsa</i> should be administered first¹⁵. It has been classified under <i>Panchakarma</i>, i.e. <i>Basti</i> (Enema therapy), <i>Vamana</i> (Emesis), <i>Virechan</i> (Purgation), <i>Raktamokshana</i> (Bloodletting), <i>Nasya</i> (elimination of <i>Dosha</i> through nasal portion)¹⁶.
2. Shamanachikitsa
<ul style="list-style-type: none"> If <i>doshas</i> are minimally imbalanced and the body is weak, then <i>Shamanachikitsa</i> should be preferred. It can be

given as external and internal¹⁷.

- Administration of proper food and medicines orally is internal treatment and the application of medicated oil, Lepa (ointment), etc. is external treatment¹⁸.
- For all skin diseases '*Khadira*' and '*Aragwadh*' are mentioned as best oral medicine and local application respectively in Ayurvedic text¹⁹.
- *Shirish*, *Nagkesara* and *Lodhra* are used as an anti-sweating agent.
- There are also the mention of various herbs from *KushthaghnaMahakashaya* that are effective curatives for skin disorders like *Khadira* (*Acacia catechu*), *Abhaya*, *Amalaki* (*Emblicofficinalis*), *Haridra* (*Curcuma longa*), *Bhallataka*, *Saptaparna*, *Aragvadha* (*Cassia fistula*), *Karavira*, *Vidanga* (*Emblicaribes*), and *Jati*²⁰.
- Herbs which are mentioned in *EladiGana* can eliminate toxins from the body, clear the complexion that leads to glowing skin and alleviates pruritus, *Kustha* and boils²¹.

Some Rasayana mentioned in Ayurvedic classics in table no. 4

Table no. 4:

Rasayana & Skin Beauty
<ul style="list-style-type: none"> • In <i>AshtangaAyurveda</i>, <i>Rasayan</i> is the one that prevents ageing of the skin and the entire body and deals with optimum life span²². • To maintain the balance between the <i>Doshas</i> and the <i>Dhatus</i>, <i>Rasayan</i> strives and contributes to the process. • According to Ayurveda, <i>Rasayan</i> and skin have an innate relation because of vitiation of <i>Rasadhatu</i> the skin gets spoiled. • Rasayanas revitalize the <i>Rasadidhatus</i> to cure and prevent skin eruptions.

BENEFITS OF AYURVEDA IN COSMETOLOGY

- The human body responds well to natural substances and has a resistance to synthetic ones.
- The skin and scalp are influenced at the cellular level, helping to improve normal function.
- Natural fragrances of flower and herbal extracts help to calm the nerves and induce relaxation.
- Herbs have a mild effect but have powerful & specific healing properties.
- Promotes the capacity to absorb products and restore the normal pH balances.
- Long history of safe human usage, not tested on animals.

DISCUSSION

The market for Ayurvedic beauty products is growing fast in last few years. Many companies have entered

the segment with branded products in categories such as skin care, hair care, soaps and essential oils. More and more products now include herbal and botanical ingredients. The botanical actives market in Europe and North America is worth US\$ 840 million. Consumption for these products is growing at 8%²³. Today, India is captivating the mainstream cosmetics industry in a big way. It starts from high-end brands creating makeup shades based on the country's bright colors to skin and hair-care lines capitalizing on Ayurveda, an ancient medicinal system using herbs and other natural ingredients²³. Indian herbs and Ayurveda products are being sourced and tested for use in the cosmetics industry and practiced beauty parlours²⁴. Herbs are currently used in their crude form, either dried into powders or pulverized with pestle and mortar. The concentration and action of bioactive compounds extracted from herbs have to be increased²⁵. These formulae have to be tested in scientific trials with an evidence based approach. India could emerge as a major contributor to the

global cosmetic industry. This is one of the strengths of India with its Ayurvedic tradition.

The India market has been traditionally inclined toward natural products for their beauty needs, and Indians have a history and knowledge of using natural products. While consumers in the rest of the world have to be educated about the benefits of natural herbs, this knowledge is well-inherited in India from generations. In Ayurvedic treaties the concept of Skin (*Twak*) is discussed with utmost importance so as to explain pathogenesis or *samprapti* of many skin diseases. Due to hectic life style and consumption of fast food various skin diseases like acne, wrinkling of skins, black spots hyper pigmentations and freckles etc. develops. It can be managed by using Ayurvedic ways without any side effects. Ayurveda believes that any type of stress or fear and any other negative thought or emotion can hamper skin's natural glow and shine. Besides emotion there are certain disorders that have adverse effect on body and skin. Few such ailments can be like that of Eczema, Psoriasis and Acne etc. There are other diseases relating to hyper pigmentation also that impair the skintissues. It is remarkable that mental stress can aggravate hyperpigmentation and thus *AcharaRasayan* should be adopted to have truthful, calm and easy life style and temper. To keep oneself fit and healthy at all ages Ayurveda has proposed numerous suggestion that if followed with dedication it maintains health and skin. Ayurveda suggests that the natural urges should not be suppressed. The bathing water must be cleaned and processed with medicinal and aromatic herb. Massaging of body should be done regularly with *Varnyadravya*. Hair massaging should be done regularly to keep it healthy and shiny. Natural products like *Bhringaraj* oil, coconut oil, castor oil, til oil or any other processed with *Heena*, *Amla*, *Aloevera*, *Brahmi*, *Neem* and *Jatamansi* should be used. Massage also relieves insomnia and induces good sleep. Good and sound sleep gives automatically glowing and fresh skin. The remedy of *Nasya* procedure must be administered to cure diseases that affects head, nose and throat and to increase the complexion of skin also. The effect of *Virechankarma* is also very effective which eliminate

the excessive *Pittadosha* which are responsible for skin disorder.

CONCLUSION

Naturally, the health and radiance of our skin depends on what products we use to wash and moisturize. Beauty is not obtained in a single day. Both external and internal beauty of an individual is determined in the *Garbhavastha* itself. It is determined at the stage of *ShukraShonitaSamyog* itself mentioned in *SushrutaSamhita*. But it can be maintained by following the *Dincharya* (daily regimen), *Ritucharyas* (seasonal regimen), *Rasayan*, *Sadvrittis* and also by the *Shodhan* (Purificatory therapies) and *Shaman* procedures explained in our classics. *Shodhan* can be used for purification of toxic materials of skin. Under *Shamanchikitsa*, *Bahirparimarjanchikitsa* can be used to boost up the skin texture.

The quantity of skin reflects our inner vitality and health. No amount of bleaching, chemical creams, or application of makeup though dexterity of a skilled beautician can hide the shallow look, if skin is unhealthy. Uses of *Rasayan* can be used as the rejuvenation therapy for skin.

REFERENCES:

1. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), Sutra Sthan 1/41, P.N.13.
2. Sushruta: Sushruta Samhita, with NibandhaSangrahaTeeka by Dalhana, Published by ChaukhambaSurbharatiPrakashan, Varanasi, Edition Reprint (2013), SharirSthan 4/4, P.N.47.
3. Vagbhata: AsthangSangraha, with Sarojhindi commentary by DrRavidattaTripathi, Published by Caukhamba Sanskrit Pratishsthan, Delhi, Edition Reprint 2005, Sutra Sthan 19/39, P.N. 370.

4. Vagbhata: AsthangSangraha, with Sarojhindi commentary by DrRavidattaTripathi, Published by Chaukhamba Sanskrit Pratishsthan, Delhi, Edition Reprint 2005, Sutra Sthan 1/123-124, P.N. 60.
5. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), ChikitsaSthan, 15/17. P.N. 381.
6. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), Sutra Vimanshtana 8/103, P.N.764.
7. Kapoor VP, Herbal cosmetics for skin and hair care, Natural product radiance, vol4 July-Aug 2007, 307-14.
8. Momin NM, Disouza JI, Tatke PA, MelitaGonsalves, Aparna (2011) Marker Based Standardization of Novel Herbal Dental Gel, Research Journal of Topical and Cosmetic Science 2.
9. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), Sutra Sthan 4/10, P.N.79.
10. Sharngadhar: Sharngadhar Samhita with Jivanprada Hindi teekaByDr.Smt. Shailaja Srivastava, published by ChaukhambaOrientalia, Varanasi, 3 rd edition (2003), Uttar khanda 11/11, P.N.428.
11. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), ChikitsaSthan 7/84, P.N.212.
12. Sharngadhar: Sharngadhar Samhita with Jivanprada Hindi teekaByDr.Smt. Shailaja Srivastava, published by ChaukhambaOrientalia, Varanasi, 3 rd edition (2003), Uttar khanda 11/17-18, P.N.429-430
13. Sharngadhar: SharngadharSamhita with Jivanprada Hindi teekaByDr.Smt. Shailaja Srivastava, published by ChaukhambaOrientalia, Varanasi, 3 rd edition (2003), Uttar khanda 11/11, P.N.428.
14. Ayurvedic Cosmetics Market Outlook 2018 from Kuick Research, pp.85.
15. Agnivesha: CharakSamhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), Sutra Sthan, 16/13-16, P.N.323.
16. Vagbhata: AsthangHridaya, with Nirmala Hindi Teeka, by BramhanandaTripathi, Published by Caukhamba Sanskrit Pratishsthan, Delhi, Edition Reprint 2009, Sutra Sthan 14/05, P.N.191.
17. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), ChikitsaSthan, 4, P.N. 2.
18. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), Sutra Sthan 11/55, P.N.250.
19. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), Sutra Sthan 25/40, P.N.455.
20. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), Sutra Sthan 4/13, P.N.82.
21. Sushruta: Sushruta Samhita, with NibandhaSangrahaTeeka by Dalhana, Published by ChaukhambaSurbharatiPrakashan, Varanasi, Edition Reprint (2013), Sutra Sthan 38/24-25, P.N.298.
22. Agnivesha: Charak Samhita with Ayurveda dipikaTeeka by Chakrapanidatta, published by ChaukhambaSurbharati Prakash, Varanasi, Edition Reprint (2009), ChikitsaSthan, 1-1/7-8, P.N.3.

23. ArunDuraismy, NithyaNarayanaswamy, Athena Sebastian, K P Balakrishnan (2011) Sun protection and anti-inflammatory activities of some medicinal plants, International Journal of Research in Cosmetic Science 1: 13-16
24. Paithankar VV (2010) Formulation and evaluation of herbal cosmetic preparation using safedmusli, Int.J. PharmTech Res 2.
25. Anil Samleti, ShrinivasBumrela, SnehalDhobale, VaibhavKekre (2012) Herbal cosmetics, Indian stream research journal 2: 123-34.