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Review Article

CRITICAL ANALYSIS OF KANAKA TAILA IN VYANGA

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ABSTRACT

A blemish free, even-toned skin is typically linked with healthy skin. *Vyanga* is one of diseases of skin that reduces the aesthetic worth of face to an extent. It is characterized by the presence of *Niruja* (painless), *Tanu* (light) and *Shyava varna mandala* (bluish black patches) on face. Although it is not a serious illness but it causes skin discoloration which stays on the face for a long time. In the era of competition, appearance of an individual gives self-confidence and linked with social status. On the contrary, *Vyanga* impact on individual's psychological state and social relationship. The disease *Vyanga* can be correlated with hyperpigmentation with special reference to *Melasma*. Topical application is additional useful in *Twaka Roga* (skin disorder) as it directly acts on lesion and simple to use. *Kanaka Taila* is a classical Ayurvedic skin oil formulation described in *Chakradatta* in the chapter named "*Kshudra Roga*" indicated in *Abhiru, Nilika & Vyanga*. It is useful in the treatment of oral diseases and to relieve skin scars and hyperpigmentation on the face. It also has *mukhakantikar* effect. This article reviews properties of various ingredients of *Kanaka Taila* which could help address *Vyanga* and its probable mode of action based on ayurvedic literature.

INTRODUCTION

Face is one of the most fundamental parts of human body which contribute in self-recognition. Since decades, a fair complexion is a desirable component and indigenous criteria for beauty. *Vyanga* is one of the most common diseases as regards the face is concerned. *Vyanga* is derived by the root words- *Vi* + *Anga. Vi* refers to *Vikruta* (defectiveness) and *Anga* means part of the body, together termed as *Vigatamangam yasya* or *Vikala* anga^[1]. It comes under *Kshudra roga*^[2], but it has got a major importance as a cosmetic problem in the society.

Aacharya Charaka has mentioned Vyanga as a disease caused by suppression of $Chardi\ vega$ ^[3]. The aggravated Vata and $Pitta\ dosha$ along with Rakta are responsible for its manifestation [4].

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As per *Aacharya Vagabhata, mansik nidana* like *Shoka, Krodha etc* are also contributing factor in the disease *Vyanga*^[5]. *Vyanga* affects the second layer of *Twak* (skin) i.e., *Lohita*^[6]. It is mainly caused by the vitiation of *Vata* & *Pitta dosha*, followed by *Rakta dhatu*. It is considered as a *Rakta Pradoshaja Vyadhi*^[7] as it is characterized by the presence of painless, thin, brown/bluish black patches on face^[8].

According to *Vagbhata*, it appears with assorted symptoms on the basis of *Doshika* participation like *Parusha* (roughness), *Parushasparsha* (rough on touch), *Shyava varna* (dark brown color) due to *Vatadosha*, *Tamra varna* (coppery color), *Nila varna* (bluish color) due to *Pitta dosha*, *Shveta varna* (whitish colour) with *Kandu* (itching sensation) due to *Kapha dosha*^[5].

The management of *Vyanga* includes both *Shodhana* and *Samana chikitsa*. The *Samana chikitsa* include both external applications and internal medications like *Lepa* (external application), *Siravyadha* (bloodletting), *Abhyanga* (oil massage), *Nasya* (nasal errhine), *Pana* (drink), *Vamana* (emesis), *Virechana* (purgation) and *Udwartana* (powder massage) [9-10].

Kanaka Taila is an oil formulation indicated in Abhiru, Nilika & Vyanga in Chakradatta in Kshudraroga Adhikara and also has mukhakantikara effect^[11]. It contains Madhuka, Priyangu, Manjistha, Rakta Chandana, Utpala, Nagakesara, Tila Taila. All ingredients of Kanaka Taila act as Varnya directly or indirectly and aids in skin lightening, thus helps in overcoming Vyanga. Kanaka Taila is also described by Bhaishajya Ratnavali^[12], Gada Nigraha^[13] and AFI^[14].

MATERIALS AND METHODS

Electronic database, 'Google scholar', PubMed, SCOPUS has been searched for relevant studies and review publications. The key words used for search are 'Kanaka Taila' in Vyanga, Nilika, etc. Abstracts and full texts of open access in English language were only considered.

Table 1: Ingredients of Kanak Taila

S.No.	Ingredients	Rasa	Guna	Virya	Vipaka	Karma
1	Madhuka ^[15]	Madhura	Guru, Snigdha	Sheeta	Madhura	Varnya, Kandughana, Charma rogahara
2	Priyangu ^[16]	Tikta, Kasaya, Madhura	Guru, Ruksha	Sheeta	Katu	Charma rogahara
3	Manjistha ^[17]	Tikta, Kasaya, Madhura	Guru, Ruksha	Ushna	Katu	Varnya, Kusthaghana
4	Rakta chandana ^[18]	Tikta, Madhura	Guru, Ruksha	Sheeta	Katu	Charma rogahara
5	Utpala ^[19]	Madhura, Kasaya, Tikta	Laghu, Snigdha, Picchil	Sheeta	Madhura	Varnya
6	Naga kesara ^[20]	Kasaya, Tikta	Laghu, Ruksha	Ushna	Katu	Kusthaghana
7	Tila Taila ^[21]	Madhura	Guru, Snigdha	Ushna	Madhura	Twak Snehan

Madhuka (Glycyrrhiza glabra)

Glycyrrhiza glabra (Family- Leguminosae) is a perennial herb attaining a height up to 2m. It is distributed in subtropical and warm temperate regions of the world^[22].

Synonyms: Yastimadhu, Kleetaka, Licorice, Sweet wood.

Part used: Root

Doshagnata: Vata-Pitta shamaka

Ayurvedic Pharmacological Properties of Glycyrrhiza glabra

The drug is *Madhura* in *Rasa*, *Guru* and *Snigdha* in *Guna*, *Sheeta* in *Virya* and *Madhura* in *Vipaka*, thus pacifying *Vata dosha* due to its *Madhura rasa* and *Guru*, *Snigdha guna* and pacifies *Pitta Dosha* due to its *Madhura Rasa* and *Sheeta Virya*^[15]. In *Charak Samhita*, *madhuka* is mentioned under *Varnya Mahakashaya*^[23]. Its many therapeutic actions include *Varnya* (skin repairing), *Kushthaghna* (Skin disorders), *Keshya* (hair growth property), *Kanthya* (speech promoting and useful in throat disorders like cough etc.), *Shonitasthapana* (bleeding disorders) and *Rasayana* (promoting overall body health) ^[24].

Table 2: *Madhuka* in various *Nighantus*

Madhuka	Bhavaprakash Nighantu ^[25]	Dhanvantari Nighantu ^[26]	Raj Nighantu ^[27]
Varga	Haritkyadi Varga	Guduchyadi Varga	Pippalyadi Varga
Rasapanchak	Madhura rasa, Guru, Snigdha, Sheeta Virya, Pitta-Vaat shamak	Madhura Rasa, Sheeta Virya, Pittaghna	Madhura Rasa, Kinchit Tikta, Sheeta Virya
Karma	Chakshusya, Bala-Varna krut, Keshya, Shukrala, Swarya	Vrishya, Shoshkshayahar, Visha- chardi vinashni	Chaksusya, Ruchyam, Shosh trishna vrana apham

Chemical Composition of Glycyrrhiza glabra

More than 400 phytochemicals have been isolated from the *G.glabra* such as triterpene (Glycyrrhizin), saponin (glycyrrhizic acid), flavonoids (glabridin), polysaccharides etc^[28]. The active ingredients found to have tyrosinase inhibiting activity are, glabrene, isoliquiritigenin, licochalcone A, and liquiritin^[29]. Liquiritin and isoliquirtin act as melanin disperser or removal of epidermal melanin^[30]. Glabridin has been shown to scavenge ROS, inhibit UVB-induced pigmentation and tyrosinase without affecting DNA synthesis, and possess anti-inflammatory properties^[31].

Pharmacological actions: Smooth muscle depressant, anti-microbial, hypolipidemic, antioxidant, anti-inflammatory, anti-ulcer, antipyretic, expectorant.

Priyangu (Callicarpa macrophylla)

Callicarpa macrophylla (Family-Verbenaceae) is an erect shrub about 1.25-2.5 m high in the sub-tropical climatic zone of the country^[32].

Synonyms: *Phalini, Mahilahavya, Vishvakasenangana*

Part Used: Flower, fruit, leaf, root. **Doshagnata:** *Tridosha shamaka*

Ayurvedic Pharmacological Properties of Callicarpa macrophylla

The drug is *Tikta, Kasaya, Madhura* in *Rasa, Guru* and *Ruksha* in *Guna, Sheeta* in *Virya* and *Katu* in *Vipaka*, thus pacifying *Tridosha*. Its many therapeutic actions include *Durgandhanashan, Vednasthapana, Dahaprashmana* and *Twaka doshahara*.

Table 3: Priyangu in various Nighantu

Priyangu	Bhavaprakash Nighantu ^[33]	Dhanvantari Nighantu ^[34]	Raj Nighantu ^[35]
Varga	Karpooradi Varga	Chandanadi Varga	Chandanadi Varga
Rasapanchaka	Tikta & Kashaya Rasa, Sheeta Virya, Vata-Pitta Shamaka	Tikta Rasa, Sheeta Virya	Tikta Rasa, Sheeta Virya
Guna-Karma	Rakta atisara nashak, Daurgandhyahar	Moha-daha vinashni, Jwara- Vanti hara	Vakrajadya vinashni, Vaanti-bhranti jwarahara

Chemical Constituents

The phytochemical screening of the plant revealed the presence of different type of chemical like seeds contain oleanolic acid. Besides diterpenoids, leaves contain flavonoids (β - sitosterol, ursolic acid, luteolin and apigenin), C22-C24 fatty acids, Calliterpenone monoacetate and Calliterpenone isopropylidene derivative^[36]. The content of luteolin increased gradually with the growth of plants and reached the peak at the end of growth period^[37].

Pharmacological actions: Anti-inflammatory, Analgesic

1. Manjistha (Rubia cordifolia)

Rubia cordifolia (family-Rubiaceae) is a perennial, prickly climber with a stem, growing up to 12 m long[38].

Synonyms: Samanga, Raktanga, Indian madder

Part Used: Root

Doshagnata: Kapha-pitta shamaka

Ayurvedic Pharmacological Properties of Rubia cordifolia

The drug is *Tikta, Kasaya, Madhura* in *Rasa, Guru* and *Ruksha* in *Guna, Ushna* in *Virya* and *Katu* in *Vipaka*, thus pacifying *Kapha-Pitta*. Its many therapeutic actions include *Raktashodhaka, Kusthagna, Varnya, Rasayana* and *Vishagna*.

Table 4: Manjistha in various Nighantu

Manjistha	Bhavaprakash Nighantu ^[39]	Dhanvantari Nighantu ^[40]	Raj Nighantu ^[41]
Varga	Haritkyadi Varga.	Guduchyadi Varga	Pippalyadi Varga
Rasapanchaka	Madhura,Tikta & Kashaya Rasa, Guru, Ushna Virya	Madhura- Kashaya Rasa, Ushna Virya	Madhura- Kashaya Rasa, Ushna Virya
Karma	Swara-varna krut, Rakta atisara nashak, Kushtaghna, Rakta Vikar, Visarpa, Vrana & Meharogahar	Used in Kapha vikara, Ugra Vrana, Meha, Raktavikar, Visha & Netraroga	Vrana-meha-jwara-visha- netraamaya apham

Chemical constituents: Quinones, terpenoids, alkaloids and their derivatives form a major class of compounds with considerable bioactivities. These components show various antioxidation, anti-inflammation and anti-proliferative bioactivities. Purpurin is one such anthraquinone that gives *R. cordifolia* antioxidant properties^[42].

Pharmacological actions: Antioxidant, anti-bacterial, anti-inflammatory, anti-lipid peroxidative activity, anti-viral.

Raktachandana (Pterocarpus santalinus)

Pterocarpus santalinus (Fabaceae family) is a small tree, growing upto 8 meters (26 feet) tall grown on the shale sub-soils, semi-arid climatic at altitudes around 750 metres (2,460 ft), in Talakona forest, in Chittoor District of Andhra Pradesh^[43].

Synonyms: Laal Chandan, Rataanjali, Red sanders

Part Used: Heart wood

Doshagnata: Kapha-Pitta shamaka

Ayurvedic Pharmacological Properties of *Pterocarpus santalinus*

The drug is *Tikta, Madhura* in *Rasa, Guru* and *Ruksha* in *Guna, Sheeta* in *Virya* and *Katu* in *Vipaka*, thus it is *Kapha-Pitta shamaka*. Its many therapeutic actions include *Raktashodhaka*, *Vishagna, Dahaprashmana* and *Sthambak*.

Table 5: Raktachandana in various Nighantu

Raktachandana	Bhavaprakash Nighantu ^[44]	Dhanvantari Nighantu ^[45]	Raj Nighantu ^[46]
Varga	Karpooradi Varga.	Chandanadi Varga	Chandanadi Varga
Rasapanchaka	Madhura- Tikta Rasa, Guru, Sheeta Virya	Tikta Rasa, Sheet Virya	Ateev Sheetalam, Tikta Rasa, Pitta-kapha apham
Guna-Karma	Netra hitam, Vrishyam Used in Jwara, Vrana & Visha, Chardi, Trishna, Raktapitta	Rakshogna, Used in Rakta- Pitta	Kapha Kasa Vami Jita, Trishaapham

Chemical Constituents

The main chemical components of *Pterocarpus santalinus* extracts are phenols, alcohols, ethers, ketones, polysaccharides and fatty acids^[47].

Pharmacological actions: Anti-inflammatory, Anti-bacterial, Anti-pyretic, Anti-androgenic

Utpala (N. stellata)

N. stellata (Family- Nymphaeaceae) is commonly known as Indian blue water lily. *N. stellata* is a perennial aquatic rooting herb, wild / cultivated, generally found in tanks and ponds throughout the warmer parts of India, particularly the Eastern Ghats^[48].

Synonyms: *Kumud,* Indian blue water lily.

Part Used: Root, flower, seed

Doshagnata: Vata-Pitta shamaka

Ayurvedic Pharmacological Properties of N. stellata

The drug is *Tikta, Madhura, Kashaya* in *Rasa, Laghu* and *Snigdha* in *Guna, Sheeta* in *Virya* and *Madhura* in *Vipaka*, thus it is *Vata-Pitta shamaka*. Its many therapeutic actions include *Medhya, Dahaprashmana* and *Vishaghna*.

Table 6: Utpala in various Nighantu

Utpala	Bhavaprakash Nighantu ^[49]	Dhanvantari Nighantu ^[50]	Raj Nighantu ^[51]
Varga	Pushpa Varga	Karveeradi Varga	Karveeradi Varga
Rasapanchaka	Madhura Rasa, Sheet Virya, Snigdha, Picchila	Madhura- Kashaya Rasa, Sheet Virya, Pitta shamaka	Madhura Rasa, Sheet Virya, Pitta nashkrut
Karma	-	-	Sugandhi, Ruchyam, Keshyam, Rasayan

Chemical constituents: The flowers of plant contain flavonoids, gallic acid, astrgalin, quercetin, and kaempferol. *N. stellata* also contain Vitamin E^[52].

Nagkesara (Mesua ferrea)

Mesua ferrea linn. (Family Guttiferae) is an evergreen medium to large-sized ornamental plant. It is a medium-sized plant long up to 13 mm.

Synonyms: *Nagpushpa, Champeya*

Part Used: Stamen

Doshagnata: Kapha-Pitta shamaka

Ayurvedic Pharmacological Properties of Mesua ferrea

The drug is *Tikta, Kashaya* in *Rasa, Laghu* and *Ruksha* in *Guna, Ushna* in *Virya* and *Katu* in *Vipaka*, thus it is *Kapha-Pitta shamaka*. Its many therapeutic actions include *Vednasthapana, Durgandha nashana, Shonitasthapana, Kusthagna* and *Vishaghna*.

Table 7: Nagkesara in Various Nighantu

Nagkesara	Bhavaprakash Nighantu ^[53]	Kaiyadev Nighantu ^[54]	Dhanvantari Nighantu ^[55]
Varga	Karpuradi Varga	Aushadhi Varga	Shatpushpadi Varga.
Rasapanchaka	Kashaya Rasa, Ushna Virya, Ruksha, Laghu	Kashaya, Ushana Veerya, Teekshana, Laghu, Ruksha	Alpa Ushana, Laghu, Tikta, Kapha Shamaka.
Karma	Aama pachana, Daurgandhyahar Used in Kushta, Visarpa	Aama pachan	Kandughna, Shophnashnam

Chemical constituents: Mesuferrone- A and B, Mesuaferrol, Mesuanic acid.

Pharmacological actions: Antioxidant, Hepatoprotective, Analgesics, Antispasmodic, Immunomodulatory, Anti-inflammatory, Antimicrobial.

Tila (Sesamum indicum)

An erect, glandular-pubescent, annual herb up to 95cm tall, branching from the base.

It is cultivated throughout India upto an altitude of 1200 m.

Part Used: Root, leaf, seed, oil. **Doshagnata:** Tridoshagna

Ayurvedic Pharmacological Properties of Sesamum indicum

The drug is *Madhura* in *Rasa, Kashaya, Tikta* in *Anurasa, Guru* and *Snigdha* in *Guna, Ushna* in *Virya* and *Madhura* in *Vipaka*, thus it is *Tridoshagna*. Its many therapeutic actions include *Vedanasthapana, Vrana shodhana, Keshya, Twachya*.

Table 8: Tila in Various Nighantu

Tila	Bhavaprakash Nighantu	Kaiyadev Nighantu	Raj Nighantu
Varga	Dhanya Varga	Dhanya Varga	Shalyadi Varga
Rasapanchaka	Madhura, Katu,Tikta Rasa, Guru, Snigdha, Ushana Virya, Madura Vipaka	Katu, Tikta, Madhura, Kashaya Rasa, Guru, Snigdha, Ushana Virya, Katu Vipaka	Madhura Rasa, Guru, Snigdha, Ushana Virya, Katu Vipaka
Karma	Balya, Keshya, Twachya, Stanya, Vrana hitam	-	-

Chemical constituents: Sesamin, sesamolin, sesamol, Vit A, B, C.

Pharmacological actions: Antioxidant, free radical scavenging activity.

DISCUSSION

Vyanga is a skin disease that comes under Kshudra roga. Hence the factors like Vataprakopaka, Pittaprakopaka and Raktadushtikara Nidana are the main causative factors for the disease Vyanga. Manasika nidana (psychological factors) like Krodha, Shoka and Ayasa are also contributing factors in the samprapti of Vyanga.

The drugs used in the treatment of *Vyanga* possess qualities like *Kushtagna, Kandughna, Raktashodhana, Twakprasadaka and Varnyakara. Varnya* drugs has action on skin colour mainly depends on *Bhrajaka Pitta*.

This review is mainly focused to find out the important properties of the individual drugs of *Kanaka*

Taila and their possible effects in Samprapti Vighatan of Vyanga.

Samprapti of Vyanga

The *Samprapti* of *Vyanga* is not explained in detail in any of the classical texts

Nidanasevana (Aharaj, Viharaj & Mansik-Krodha, Shoka etc)

→ *Doshaprakopa* (Vitiation of *Vata* and *Pitta*)

Rasadusti and Raktadusti

Mukha mandal Sthana samshraya

Vyakta lakshana (Niruja,Tanuka, Shyava Mandala)

↓ Vyanga

Probable mode of action of Kanaka Taila

Most of the ingredients of the formulation have *Varnya* property. *Manjishta* is *Rakta prasadaka* and also *Kushtaghna dravya*. *Yashtimadu, Rakta chandana* provides good complexion to the skin.

Also, the ingredients of *Kanaka Taila* possess *Madhura, Tikta and Kashaya Rasa*.

These Rasas do the Upashamana of Prakupita (vitiated) Vata and Pitta and thus pacifies Pitta which is the main culprit in the causation of *Vyanga*. Most of them possess Snigdha, Laghu, Ruksha Gunas. Snigdha Guna is responsible for Mardava and Varna prasadhana whereas Laghu, ruksha are the properties of Agneya Dravya which in turn are responsible for Prabha, Prakasha and Varna. This taila contains Raktaprasadaka, Vata Pitta Shamak, Pittashamak, Kushtagna, Varnya drugs. So, the properties of *Kanaka taila* are favouring the objective for caring and healing of the *Vyanga*.

After the application of *Taila*, *Abhayanga* should be done which is *Varnaprasadhak* itself. *Taila*, then comes in contact with *Roma* and *Romakupa*. *Paka* of active principle of drug takes place by action of *Bhrajaka Agni* and *Rasadhatuagni*. *Bhrajaka Pitta* metabolizes externally applied drug. Thus, the *Dosha* is pacified and pathogenesis is break down by active principle of drug.

CONCLUSION

Vyanga is not only limited to cosmetic problem but it also has negative impact on quality of life. As Vyanga is a disease concerned with skin, topical application is preferred. Many of such formulations are found to be effective in making skin healthy and to get rid of skin ailments, especially hyper pigmentation disorders. The drugs of Kanaka Taila are Pittashamaka, it has properties like Guru, Snigdha, Madhura, Tikata Rasa and it advances glow and complexion of the skin. Kanaka Taila has antioxidant, anti-inflammatory and anti-hyperpigmentation effect. It prevents black spots, dark circles, scars, and hyperpigmentation, helpful in treatment of Vyanga.

REFERENCES

- 1. Apte V S, the practical Sanskrit-English dictionary. Revised and enlarged edition. 1957-1959, Prasad Prakashan: 2020; p.1507.
- 2. Gupt A, Astang Hridyam, Chaukhambha Prakashan, Varanasi. Edition: Reprinted, 2019: Uttara Sthana Chapter 31.
- 3. Shastri K, Charak Samhita, Sutra Sthana Chapter 7 Verse14. Chaukhamba Sanskrit Sansthan, Edition 2006, Part 1, Page No.153.
- 4. Shastri K, Charak Samhita, Sutra Sthana Chapter 18 Verse 25. Chaukhamba Sanskrit Sansthan, Edition 2006, Part 1, Page No.379.

- 5. Shastri P H S, Ashtanga Hridaya. Chaukhamba Sanskrit Sansthan Varanasi 1st edition 2014. Uttar Sthana, 31/28-29. p. 889.
- 6. Shastri K. A. editor. Sushruta Samhita, Sharira Sthana, Garbhavyakarn Adhyaya, 4/4; Varanasi; Chaukhamba Sanskrit Sansthan; Edition Reprint, 2016; 37.
- 7. Shastri K, Charak Samhita, Chaukhamba Sanskrit Sansthan, Edition 2006, Sutra Sthana Chapter 28 Verse12.
- 8. Shastri K. A. editor. Sushruta Samhita of Sushruta, Nidana Sthana, Kshudraroga Nidana Adhyaya, 13/45-46; Varanasi; Chaukhamba Sanskrit Sansthan; Edition Reprint, 2016; 373.
- 9. Gupt A, Astang Hridyam, Chaukhambha Prakashan, Varanasi. Edition: Reprinted, 2019: Uttara Sthana Chapter 32.
- 10. Shastri K. A. editor. Sushruta Samhita of Sushruta, Chaukhamba Sanskrit Sansthan, Varanasi; Edition Reprint, 2016; Chikitsa Sthan Chapter 20.
- 11. Bajpayee, P.J. Chakradatta, Khemraj Shrikrishnadas Press, Edition 2006, Page-238
- 12. Shastri.A, Bhaishajya Ratnavali, Chaukhamba Sanskrit Bhawan, Edition 2006, Part-3, Page 188.
- 13. Tripathi. I. Gadanigraha, Chaukhamba Sanskrit Sansthan, edition 2005, page 400.
- 14. Ayurvedic Formularly of India, Part 2.
- 15. Sharma P.V. Dravya Guna Vigyana, Chaukhamba Bharti Academy, re-edition 2020 Part 2 Page 253.
- 16. Sharma P.V. Dravya Guna Vigyana, Chaukhamba Bharti Academy, re-edition 2020 Part 2 Page 781.
- 17. Sharma P.V. Dravya Guna Vigyana, Chaukhamba Bharti Academy, re-edition 2020 Part 2 800.
- 18. Sharma P.V. Dravya Guna Vigyana, Chaukhamba Bharti Academy, re-edition 2020 Part 2 Page 718.
- 19. Sharma P.V. Dravya Guna Vigyana, Chaukhamba Bharti Academy, re-edition 2020 Part 2 Page 713.
- 20. Sharma P.V. Dravya Guna Vigyana, Chaukhamba Bharti Academy, re-edition 2020 Part 2 Page 783.
- 21. Sharma P.V. Dravya Guna Vigyana, Chaukhamba Bharti Academy, re-edition 2020 Part 2 Page 120.
- 22. Anilkumar D, Joshi H, Nishteswar K. Review of Glycyrrhiza Glabra (Yastimadhu)-A Broad Spectrum Herbal Drug. Pharma Science Monitor. 2012 Dec 1;3(4).
- 23. Shastri.K. Charak Samhita, Chaukhambha Sanskrit Sansthan, Edition 2004, Part-1, Page- 61.
- 24. Sharma P.C, Yelne M.B, Dennis T.J. Database on medicinal plants used in Ayurveda. Vol 3. CCRAS, New Delhi, 2005, pg: 561-566
- 25. Chunekar K.C, Pandey G.S editor, Bhavaprakash Nighantu, A.M.S, Reprint 2020, Page 62-64.
- 26. Sharma G.P, Dhanvantari Nighantu, Chaukhambha Orientalia Varanasi, 4th Edition, 2005, Page 41.
- 27. Tripathi I, Raj Nighantu, Chaukhambha Krishna das Academy, Edition 2010, Page 164.

- 28. Sharma V, Katiyar A, Agrawal RC. Glycyrrhiza glabra: chemistry and pharmacological activity. Sweeteners. 2018:87
- 29. Pastorino, G., Cornara, L., Soares, S., Rodrigues, F., & Oliveira, M. B. P. (2018). Liquorice (Glycyrrhiza glabra): A phytochemical and pharmacological review. Phytotherapy research, 32(12), 2323-2339
- 30. Amer M, Metwalli M. Topical liquiritin improves melasma. International journal of dermatology. 2000 Apr;39(4):299-301.
- 31. Hollinger JC, Angra K, Halder RM. Are natural ingredients effective in the management of hyperpigmentation? A systematic review. The Journal of clinical and aesthetic dermatology. 2018 Feb;11(2):28
- 32. Singh LR, Singh K. Pharmacognostic Evaluation of Organically Cultivated Priyangu: A Wonder Shrub. AdvanCeS in Plant SCienCeS. 2020 Jun.
- 33. Chunekar K.C, Pandey G.S editor, Bhavaprakash Nighantu, A.M.S, Reprint 2020, Page 237-240.
- 34. Sharma G.P, Dhanvantari Nighantu, Chaukhambha Orientalia Varanasi, 4th Edition, 2005, Page 93.
- 35. Tripathi I, Raj Nighantu, Chaukhambha Krishna das Academy, Edition 2010, Page 404.
- 36. Patel R, Shukla PK, Verma A, Singh MP. Pharmacognostical, phytochemical evaluation and insilico lead finding of Callicarpa macrophylla with hepatoprotective potentials. Journal of Chemical and Pharmaceutical Research. 2016; 8(3):383-93.
- 37. Pandey Ajay S., Srivastava Bhavana, Wanjari Manish M, Pandey Narendra K., Jadhav Ankush D (2014), Callicarpa Macrophylla: A Review of its Phyto-Chemistry, Pharmacology, Folklore Claims, And Ayurvedic Studies, Global J Res. Med. Plants & Indigen. Med., Volume 3(3): 91-100.
- 38. Verma A, Kumar B, Alam P, Singh V, Gupta SK. Rubia cordifolia-a review on pharmaconosy and phytochemistry. International Journal of Pharmaceutical Sciences and Research. 2016 Jul 1; 7(7):2720.
- 39. Chunekar K.C, Pandey G.S editor, Bhavaprakash Nighantu, A.M.S, Reprint 2020, Page 107-108.
- 40. Sharma G.P, Dhanvantari Nighantu, Chaukhambha Orientalia Varanasi, 4th Edition, 2005, Page 19.

- 41. Tripathi I, Raj Nighantu, Chaukhambha Krishna das Academy, Edition 2010, Page 173-174.
- 42. Humbare RB, Sarkar J, Kulkarni AA, Juwale MG, Deshmukh SH, Amalnerkar D, Chaskar M, Albertini MC, Rocchi MB, Kamble SC, Ramakrishna S. Phytochemical Characterization, Antioxidant and Anti-Proliferative Properties of Rubia cordifolia L. Extracts Prepared with Improved Extraction Conditions. Antioxidants. 2022 May 20;11(5):1006.
- 43. Yadav D, Srivastava S, Singh J, Tripathi YB. Pharmacognostic evaluation of Pterocarpus santalinus Linn.
- 44. Chunekar K.C, Pandey G.S editor, Bhavaprakash Nighantu, A.M.S, Reprint 2020, Page 182-184.
- 45. Sharma G.P, Dhanvantari Nighantu, Chaukhambha Orientalia Varanasi, 4th Edition, 2005, Page 91.
- 46. Tripathi I, Raj Nighantu, Chaukhambha Krishna das Academy, Edition 2010, Page 399.
- 47. Jiang S, Wei Y, Liu Z, Ni C, Gu H, Peng W. Molecules and functions of rosewood: Pterocarpus santalinus. Journal of King Saud University-Science. 2020 Mar 1; 32(2):1712-7.
- 48. Raja MM, Sethiya NK, Mishra SH. A comprehensive review on Nymphaea stellata: A traditionally used bitter. Journal of advanced pharmaceutical technology & research. 2010 Jul; 1(3):311.
- 49. Chunekar K.C, Pandey G.S editor, Bhavaprakash Nighantu, A.M.S, Reprint 2020, Page 470-471.
- 50. Sharma G.P, Dhanvantari Nighantu, Chaukhambha Orientalia Varanasi, 4th Edition, 2005, Page 146.
- 51. Tripathi I, Raj Nighantu, Chaukhambha Krishna das Academy, Edition 2010, Page 334.
- 52. Das DR, Sachan AK, Mohd S, Gangwar SS. Nymphaea stellata: a potential herb and its medicinal importance. Journal of Drug Delivery and Therapeutics. 2012 May 14; 2(3).
- 53. Chunekar K.C, Pandey G.S editor, Bhavaprakash Nighantu, A.M.S, Reprint 2020, Page 219.
- 54. Sharma P V. Kaidev Nighantu, Chaukhambha Orientalia Varanasi.
- 55. Sharma G.P, Dhanvantari Nighantu, Chaukhambha Orientalia Varanasi, 4th Edition, 2005, Page 78.

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