IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Varnya Dravyas In Dhanvantari Nighantu: A Review Of Single Herbal Drugs

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ABSTRACT

Ayurveda emphasizes the preservation of health and prevention of disease through a holistic approach that integrates physical and mental well-being. Skin complexion (Varṇa) is considered an important indicator of internal physiological balance, governed mainly by *Bhrajaka Pitta* and *Rakta dhatu.* Substances that maintain and enhance natural complexion are described as *Varṇya dravyas*. *Dhanvantari Nighantu*, a classical Ayurvedic lexicon, provides detailed descriptions of several such drugs along with their pharmacological attributes.The present study aims to review and analyze the *Varṇya dravyas* mentioned in *Dhanvantari Nighantu* and to correlate their classical properties with findings from modern scientific research, particularly melanin inhibitory activity. A literary review of *Dhanvantari Nighantu*, Ayurvedic *Samhitas*, and contemporary research articles was conducted. Eight *Varṇya dravyas—Jatamansi, Gandhamansi, Vyaghranakh, Guggul, Rasanjan, Shirish, Shinshap*, and *Sarjak*—were identified and evaluated.The study reveals that these *dravyas* predominantly possess *Tikta–Kashaya rasa, Laghu–Ruksha guna, and Sheeta or Ushna veerya,* contributing *to Pitta–Rakta shaman* and *Tvak prasadana.* Modern studies support their antioxidant, anti-inflammatory, tyrosinase inhibitory, and melanin inhibitory activities. The findings validate the relevance of classical *Varṇya dravyas* in maintaining skin health and managing pigmentation disorders.

Keywords:

Ayurveda, Dhanvantari Nighantu, Varṇya dravyas, Skin complexion, Melanin inhibition.

INTRODUCTION

Ayurveda primarily aims to maintain health and to treat diseases while also preventing their recurrence[1]. It describes diseases (*vikara* or *roga*) broadly under two categories—physical (*sharirik*) and mental (*mansik*). The Ayurvedic system is rich in medicinal knowledge, offering therapies and remedies that address both bodily disorders and mental or emotional imbalances. In this way, Ayurveda adopts a holistic approach, focusing on the well-being of the body as well as the mind. A *nighantu* is a classical ayurvedic glossary that explains the names, synonyms, properties, actions, and therapeutic uses of medicinal substances. It helps in the correct identification, classification, and clinical application of drugs used in Ayurveda. *Dhanvantari Nighantu* is one of the oldest Ayurvedic *materia medica*, believed to have been composed between the 8th and 10th century AD. The original name of this text is *Dravyavali Samucchaya*. It contains a total of seven vargas, namely: *Guduchyadi varga, Shatapushpadi varga, Chandanadi varga, Karaviradi varga, Amradi varga, Suvarnadi varga,* and *Mishrakadi varga*. This classical text describes 527 drugs, which are classified based on their *rasa* (taste), *guna* (qualities), *virya* (potency), and *vipaka* (post-digestive effect)[2].

In today's world, increasing exposure to media and cosmetic advertisements has made people more conscious about their physical appearance, especially skin complexion. This growing concern has widened the gap between modern cosmetic approaches and the holistic principles described in ancient Ayurvedic literature. To bridge this gap, it becomes essential to explore classical Ayurvedic texts that emphasize natural and sustainable skin care.

In Ayurveda, the term *varna*[3] refers to colour or complexion. Substances that enhance the natural colour, texture, and radiance of the skin are known as *varnya dravyas*. In Ayurveda, *Varṇya* denotes the quality of a substance that enhances and maintains the natural complexion and radiance of the skin. It functions through the regulation of *Bhrajaka Pitta* and the maintenance of *Rakta dhatu* integrity, thereby promoting *Tvak prasadana*. *Varṇya* does not imply skin whitening but refers to the restoration of normal physiological pigmentation and skin health. The melanin inhibitory activity may be considered a modern scientific correlate of the *varṇya* property described in Ayurvedic literature. Healthy skin has always been considered an important indicator of overall well-being, and Ayurveda gives special importance to maintaining it through natural means.

Dhanvantari Nighantu is one of the classical Ayurvedic lexicons that extensively describes *varnya dravyas*. These drugs are believed to support skin health and improve complexion. To understand their relevance in the present era, it is necessary to identify and evaluate the *varnya dravyas* mentioned in this text.

Therefore, the present study focuses on a detailed literary review of *dhanvantari nighantu* along with an analysis of recent scientific research. This review aims to screen and evaluate the *varnya dravyas* for their potential role in promoting healthy skin and managing skin-related disorders.

The findings indicate that the properties attributed to these drugs in classical literature are supported by modern scientific studies. This suggests that the *varnya* dravyas described in *Dhanvantari Nighantu* remain relevant and effective for maintaining skin health. Hence, these medicinal plants can be considered valuable for promoting natural complexion and overall skin wellness in humankind.

METHODS

The following resources were reviewed for the study of *varnya dravyas*:

1. *Dhanvantari Nighantu.*
2. *Ayurvedic Samhitas,*
3. Internet and databases
4. Various research articles

OBSERVATION & RESULTS

Dravya having *varnya* properties in *Dhanvantari Nighantu* are been described ahead with detailed description.

1. *Jatamansi*

Botanical Name: *Nardostachys jatamansi* DC [4]
Family: *Valerianaceae*
Reference : *Chandanadi varga*
Action: *Varnya*
Botanical description: It is an erect, perennial, aromatic herb, attaining a height of 10–70 cm. The plant has a long, woody, greyish, rhizomatous, tail-like rootstock, covered with reddish-brown hairs or tufted fibrous remains of withered radical leaf petioles.
Leaves are of two types: radical leaves measuring 15–20 × 2.5 cm, longitudinally nerved, glabrous, and narrowed into a petiole; cauline leaves are 1–2 pairs, 2.5–7.5 cm long, sessile, and oblong to subovate.
Flowers are pale white or pink, arranged in terminal corymbose cymes.
The fruit is about 4 mm long, covered with ascending white hairs, and crowned with ovate, acute, dentate calyx teeth.
Flowering: June–July; Fruiting: September–October.[5]
Modern Research : Aqueous extract of *Nardostachys jatamansi* (AENJ) and its major compounds (desoxo-narchinol A and nardosinonediol) significantly reduced melanin content and inhibited tyrosinase activity in α-MSH-stimulated B16F10 melanoma cells — a standard in vitro model for melanin production. [6]

2. *Gandhamansi*

Botanical Name: *Corydalis govianana* Wall [7]
Family: *Papaveraceae*
Reference : *Chandanadi varga*
Action: *Varnya*

Botanical description: *Corydalis* is an upright, perennial herb that typically grows to a height of about 15–70 cm. It has a thick rootstock that is covered with the remnants of leaf bases. The leaves emerge from the root, with one or two leaves present near the base of the stem. The flowers are yellow and borne in raceme-type inflorescences, each raceme consisting of up to 25 flowers and reaching a length of around 15 cm. This species naturally occurs in the Himalayan region, where it grows at elevations ranging from 2400 to 4800 meters.[8]

Modern Research: No research has been specifically done on this drug.

3. *Vyaghranakh*

Botanical Name: *Capparis zeylanica* [9]
Family: *Capparaceae*
Reference : *Chandanadi*
Action: *Varnya*

Botanical description:
Capparis zeylanica is a climbing shrub. Young parts are covered with rufous tomentum. Leaves are elliptic-oblong, with a long stout mucro, narrow base, reticulate venation, and are glabrous and shining above; petiole about 6 mm long. Stipules are hooked spines.

Flowers are supra-axillary, solitary or 2–3, arranged vertically. Sepals are 9 mm long, concave and rufous-pubescent outside. Petals are twice as long as sepals and villous. Gynophore is about 3.2 cm long. Ovary ellipsoid.Fruit is subglobose, about 3.2 cm in diameter, on a thickened, obtusely four-angled stalk, red-brown, with many seeds.[10]

Modern Research : *Capparis* species are known to contain flavonoids and phenolic compounds (like quercetin) that can influence skin pigmentation pathways or antioxidant effects, which are often correlated with anti-melanin activity in skin research [11]

4. *Guggul*

Botanical Name: *Balsamodendron mukul* Hook ex stocks.) dn [12]
Family: *Burseraceae*
Reference : *Chandanadi varga*
Action*: Varnya*
Botanical description:
Guggul (*Commiphora wightii* (Arn.) Bhand.) is a woody shrub or small tree reaching about 2–3 m in height. It is much branched, with knotty, crooked branches often ending in sharp spines. The bark is silvery and papery, peeling off in thin flakes. Leaves are rhomboid-ovate, usually 1–3 foliate, smooth and shiny, with serrated margins; lateral leaflets are smaller than the terminal one. Flowers are borne in small clusters of 2–3, with brownish-red petals and 8–10 stamens. The fruit is a small, red, ovoid drupe. The plant yields a pale yellow to brown aromatic oleo-gum-resin, collected from January to March, which appears as brittle, waxy, translucent tears and turns milky when mixed with water.[13]

Modern Research: *Guggulsterone*, a steroidal phytochemical from the resin of *guggul.* It Inhibits melanin biosynthesis by downregulating tyrosinase enzyme activity and melanogenic gene expression in cultured mouse melanoma cells .It likely involves suppression of cAMP-dependent melanogenic pathways and transcriptional control of key melanin synthesis regulators (*MITF, TYR, TRP-1, and TRP-2*). It is a potential natural ingredient for skin-lightening formulations targeting hyperpigmentation and complexion enhancement.[14]

5. *Rasanjan*

Rasanjan is a yellowish, semi-solid extract prepared by processing the decoction of Daruharidra (Berberis aristata) with milk. It is also known as Extractum Berberis. [15]
Botanical Name: Berberis aristata DC. [16]
Family: *Berberidaceae*
Reference : *Chandanadi varga*
Action: *Varnya*

Botanical description: Berberis aristata is an erect, spiny woody shrub growing up to 2–3 m in height. The bark is yellowish-brown externally and deep yellow internally, bearing three-branched spines (modified leaves). Leaves occur in tufts of 5–8, are simple, leathery, toothed, pinnately veined, dark green on the upper surface and light green on the lower surface. Flowering in *Berberis aristata* occurs from mid-March to April. The yellow, complete and hermaphrodite flowers are arranged in racemes. The flower is polysepalous (3 large and 3 small sepals), polypetalous with six petals, polyandrous with six stamens, and has a single gynoecium. Bright red, acidic, edible berries with medicinal value ripen from mid-May to June [17]

Modern Research: Berberine, an isoquinoline alkaloid found abundantly in *Berberis aristata* (Daruharidra), has been shown to inhibit melanin production in melanocyte cell studies.

In α-MSH-stimulated melanoma cells (B16F10), berberine reduced melanin content by downregulating tyrosinase and MITF (microphthalmia-associated transcription factor), both crucial for melanin synthesis. [18]

6. Shirish

Botanical Name : *Albizzia Lebeck Benth*.[19]
Family : *Fabaceae*
Reference : *Amradi varga*
Action: *Varnya*

Botanical description: A medium to large, upright, unarmed tree, about 20 m tall, with a spreading crown. The bark is grey to dark brown, rough and irregularly cracked; young shoots are hairless.
Flowers are white to greenish-yellow, fragrant, borne in globose umbellate heads (2–3.8 cm diameter) on peduncles 3.8–7.5 cm long, solitary or in clusters of 2–4.
Leaves are abruptly bipinnate, with 4–8 pinnae and 5–9 pairs of leaflets; rachis glabrous or downy, with a large gland at the base of the petiole.
Fruit is a linear-oblong pod, 10–30 cm long, thin, smooth and shining, green turning yellow-brown at maturity. Seeds are 4–12, pale brown, ellipsoid to oblong. [20]

Modern Research : A research report (development and cosmeceutical evaluation) on a topical emulgel containing *Albizia lebbeck* bark extract found that the formulation produced significant effects on skin melanin levels in human skin tests (reduced melanin/erythema etc.) alongside antioxidant effects, though the study discussed cosmetic outcomes rather than a traditional melanin synthesis assay in a lab model. [21]

7. Shinshap

Botanical Name : *Dalbergia sissoo* Roxb. Dn [22]
Family : *Fabaceae*
Reference : *Amradi*
Action : *Varnya*

Botanical description : *Dalbergia sissoo* Roxb. , commonly called Indian Rosewood, is a member of the family Fabaceae. It is extensively cultivated in the Indian plains and occurs naturally in the western Himalayas up to about 1300 m altitude, as well as in the Terai regions of Nepal, Sikkim, and upper Assam. The tree usually grows to a height of 10–15 m, occasionally reaching 25 m, and develops a wide-spreading crown. It yields strong, durable, dark brown timber with a smooth texture, highly valued for furniture and various wooden articles. The leaves are clustered, rounded, and pointed, resembling those of *Ziziphus* but are larger, thicker, and glossier. The flowers are small and appear in clusters, while the fruits are flat, elongated pods containing compressed seeds. Due to these features, *D. sissoo* is an important timber-producing tree of economic and ecological importance [23]

Modern Research : A recent *in vitro and in silico* study investigated *Dalbergia sissoo* leaf extracts for skin therapeutic properties, including *interaction with tyrosinase* — a key enzyme in melanin biosynthesis. Methanolic extracts showed *potential compounds* that could bind to tyrosinase with good affinity in molecular docking studies. Tyrosinase inhibition is directly related to melanin production suppression, which is a mechanism behind *skin whitening / complexion enhancing* effects. This suggests *D. sissoo* extracts might have anti-tyrosinase / antimelanogenic potential, making them interesting for cosmetic use against pigmentation.[24]

8. Sarjak

Botanical Name : *Viteria indica* Linn. [25]
Family : *Dipterocarpaceae*
Reference : *Amradi*
Action : *Varnya*
Botanical description : A large, elegant perennial tree attaining about 30 m height, with a clean, cylindrical trunk nearly 15 m long and a girth of about 4.5 m. The bark is rough, whitish to grey, and peels off in thick, rounded flakes.
The leaves are coriaceous, ovate to oblong, and entire. Leaf fall occurs in March, followed by new foliage in April–May; a second flush appears after the rains from October to December.
The flowers are white, fragrant, and borne in terminal corymbose panicles. Flowering takes place from January to March.
The fruit is an ovoid capsule, pale brown, fleshy, measuring 8–11 cm long and 3.5–6 cm in diameter. It is single-seeded, reddish-white, rich in fat, and ripens during June–July. [26]
Modern Research : Kirubakaran et al. (2017) developed and evaluated a clear-complexion skin whitening cream containing *Vateria* indica bark extract along with *Glycyrrhiza glabra* root extract. The study reported that the herbal formulation showed melanin inhibitory effects via a cellular melanin inhibition pathway compared with control. [27]

The following *dravyas* were found to have *varnya* properties according to the *Dhanvantari Nighantu*. Their *varga, guna, rasa* and *veerya* has been mentioned in order to study these *dravyas* well[28][29][30].

Sr. No	*Dravya*	*Varga*	*Guna*	*Rasa*	*Veerya*	*Vipaka*	*Doshaghnata*
1	*Jatamansi*	*Chandanadi*	*Laghu, Snighdha*	*Madhur, Kashay*	*Katu*	*Sheeta*	*Tridoshashamak*
2	*Gandhamansi*	*Chandanadi*	-	*Kashay*	-	-	-
3	*Vyaghranakh*	*Chandanadi*	*Laghu Ruksha*	*Tikta, Kashay*	*Ushna*	*Katu*	*Vaatkaphaghna*
4	*Guggul*	*Chandanadi*	*Picchil, Laghu Sukshma, Ruksha,*	*Katu, Tikta, Kashay*	*Ushna*	*Katu*	*Tridoshashamak*
5	*Rasanjan*	*Chandanadi*	*Laghu, Ruksha*	*Tikta*	*Sheeta*	*Katu*	*Kaphapittaghna*
6	*Shirish*	*Amradi*	*Laghu, Ruksha, Tikshna*	*Tikta*	*Ushna*	*Katu*	*Tridoshashamak*
7	*Shinshapa*	*Amradi*	*Guru*	*Katu*	*Ushna*	*Katu*	*Tridoshashamak*
8	*Sarjak*	*Amradi*	*Ruksha*	*Kashay*	*Sheeta*	*Katu*	*Pittaghna*

DISCUSSION

Ayurveda emphasizes the maintenance of health and the prevention of disease through a holistic understanding of the body and mind. Skin health and complexion (*Varṇa*) have been given special importance in classical texts, where balanced physiology rather than artificial whitening is considered the ideal outcome. In this context, the concept of *Varṇya dravyas*, as described in *Dhanvantari Nighantu,* holds significant relevance even in the modern era.

The present review identifies eight herbal dravyas classified as *varṇya* in *Dhanvantari Nighantu,* belonging mainly to *Chandanadi varga* and *Amradi varga*. These drugs possess specific combinations of *rasa, guna, veerya, vipaka,* and *doṣaghna* properties, which collectively contribute to skin nourishment, detoxification, and complexion enhancement.

From an Ayurvedic perspective, *varṇya* action is primarily mediated through the regulation of *Bhrajaka Pitta*, purification of *Rakta dhatu*, and promotion of *Tvak prasadana*. Drugs with *Sheeta veerya, Tikta–Kashaya rasa, and Laghu–Ruksha guna* are particularly effective in pacifying *Pitta* and *Rakta doṣa*, which are the main contributors to skin discoloration and inflammatory skin disorders. This classical rationale is clearly reflected in many of the dravyas studied, such as *Jatamansi, Rasanjan, Sarjak*, and *Vyaghranakh*.

When correlated with modern scientific findings, a strong parallel can be observed between *Varṇya karma* and melanin inhibitory or tyrosinase-inhibitory activity. For example, *Nardostachys jatamansi* has been experimentally shown to reduce melanin synthesis and inhibit tyrosinase activity in B16F10 melanoma cells, directly supporting its traditional *varṇya* claim. Similarly, Berberine from Berberis aristata (*Rasanjan*) has demonstrated downregulation of MITF and tyrosinase, key regulators of melanogenesis.

Although direct melanogenesis studies are lacking for some *dravyas* like *Gandhamansi* (*Corydalis govianana*), their inclusion in classical texts suggests long-standing empirical knowledge that warrants further scientific exploration. In the case of *Capparis zeylanica*, the presence of flavonoids and phenolic compounds known for antioxidant and pigmentation-modulating effects supports its potential *varṇya* role.

Dravyas such as *Guggul, Shirish, Shinshap*, and *Sarjak* show indirect yet significant evidence through antioxidant, anti-inflammatory, photoprotective, or anti-tyrosinase mechanisms. Notably, Guggulsterone and extracts of Dalbergia sissoo have shown interaction with melanogenic pathways in modern studies, validating their traditional classification.

The pharmacological relevance of *guna–rasa–veerya* combinations becomes evident when mapped to modern mechanisms such as oxidative stress reduction, enzyme inhibition, and cellular signaling regulation. Drugs described as *Tridoshashamaka* further indicate their suitability for long-term use in maintaining skin health without adverse effects.

Overall, the findings demonstrate that the *varṇya dravyas* of *Dhanvantari Nighantu* are not merely cosmetic agents but therapeutic substances that restore physiological balance, leading to improved complexion and skin health. The available modern research supports the Ayurvedic view that healthy skin is a reflection of internal balance rather than superficial alteration.

CONCLUSION

The present review highlights the significance of *Varṇya dravyas* described in *Dhanvantari Nighantu* in the maintenance of skin health and natural complexion. Ayurveda views complexion (*Varṇa*) as an indicator of internal physiological balance, particularly of *Bhrajaka Pitta* and *Rakta dhatu*, rather than merely an external cosmetic attribute. The classical descriptions of *varṇya* substances emphasize restoration of normal skin tone, radiance, and health.The eight dravyas identified—*Jatamansi, Gandhamansi, Vyaghranakh, Guggul, Rasanjan, Shirish, Shinshap, and Sarjak*—possess specific combinations of rasa, guna, *veerya, vipaka, and doṣaghna* properties that support their traditional *varṇya* action. Most of these drugs exhibit *Tikta–Kashaya rasa, Laghu–Ruksha guna, and Sheeta or Ushna veerya,* which are known to pacify *Pitta* and purify *Rakta*, thereby promoting *Tvak prasadana*. Correlation with modern scientific research reveals that many of these *dravyas* demonstrate melanin inhibitory, tyrosinase inhibitory, antioxidant, and anti-inflammatory activities, which can be considered contemporary equivalents of the *Ayurvedic varṇya* concept. Experimental evidence for drugs such as *Nardostachys jatamansi, Berberis aristata, Guggul, Dalbergia sissoo*, *Albizia lebbeck*, and *Vateria indica* supports their traditional claims, while others require

further scientific validation.Thus, the study concludes that the *varṇya dravyas* mentioned in *Dhanvantari Nighantu* remain scientifically relevant and therapeutically valuable in the present era. These medicinal plants offer a natural, holistic, and sustainable approach to skin health, bridging classical Ayurvedic wisdom with modern dermatological science. Further experimental and clinical studies are recommended to explore their full potential in the management of pigmentation disorders and promotion of overall skin wellness.

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