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VEPACHEDU EDUCATIONAL FOUNDATION

మన సంస్కృతి

Mana Sanskriti (Our Culture)

Chief Editor: Dr. Sreenivasarao Vepachedu, Esq.

Henna



Lawsonia inermis L. (Botanical), Madayantika (Sanskrit)¹, Maduyanta (Tibetan), Henna (English), Mehendi (Hindi, Urdu, Arabic), Shudi (Bengali), Goranta (Kannada, Telugu), Mailanschi (Malyalam), Padchi-methi (Marathi), Dvivrantā (Sanskrit), Aivanam (Tamil), Monjathi (Oriya), Inai (Sumatra), Pachar kuku (Java)

Introduction

Henna has been used cosmetically and medicinally for over 9,000 years². Archaeological and anthropological evidence indicate that henna traditions had early origins in the Mediterranean, Nubia, Libya, Tunisia, Arabia, Assyria, Mesopotamia, Persia, and India. Henna's use and traditions began in the late Neolithic period, are included in all ancient and modern religions in these areas³.



A paste made of henna leaves is used for coloring the skin, hair and fingernails. Henna body art is presently popular as adornment for weddings and other celebrations in India, South Asia, the Middle East and Africa⁴.

¹ Madayantika:

(http://www.ayurvedaconsultants.com/index.php?option=com_content&view=article&id=222:madayantika&catid=31:herbs-m&Itemid=537)

² Chaudhary et al. *Lawsonia inermis* Linnaeus: A Phytopharmacological Review, *International Journal of Pharmaceutical Sciences and Drug Research*; 2(2):pp 91-98(2010) (<http://www.ijpsdr.com/pdf/vol2-issue2/2.pdf>).

³ Henna Traditions. (<http://www.hennapage.com/henna/why.html>).

⁴ Cartright-Jones, Developing Guidelines on Henna: A Geographical Approach, Problems Created by Henna's Rapidly Changing Geographies (<http://www.hennapage.com/henna/encyclopedia/mastersessay/chapter1masters.pdf>).

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Henna is a tropical plant native to Old World (Africa, Asia and India). Vedic and Buddhist India used henna for medicinal purposes, fingernail dye, and hair dye. Ancient Indian texts, pre-Islamic Arabic and Persian texts, and artifacts have body markings consistent with henna. Evidence in the Ajanta caves at 400 CE indicates that men and women used henna to paint feet and hands⁵.

It is a plant having small opposite leaves and axillary panicles of white flowers. Henna is a branched glabrous shrub or small tree, cultivated for its leaves although stem bark, roots, flowers and seeds have also been used in traditional medicine⁶.

Henna grows in arid subtropical areas, where night temperatures do not fall beneath 11 °C. Henna survives on 50 mm of rain per year, and daytime temperatures of up to 45 °C, producing the greatest dye concentrations in the harshest conditions⁷.

In India, henna is a major commercial crop in the northwestern states where the climate is relatively hot and dry. Gujarat, Madhya Pradesh and Punjab farm henna, primarily to be sold as hair dye. Rajasthani henna farms often produce body art quality henna⁸.

Traditional and Cultural Use

For over five thousand years henna has been a symbol of good luck, health, fertility and sensuality in the Arab world. The plant has been associated with positive magic and provides a link to an ancient age full of spirits (good and bad, baraka and jnoun)⁹. Henna is a tradition that



⁵ Cartright-Jones, Developing Guidelines on Henna: A Geographical Approach, Mapping the Historical Regions of Henna (<http://www.hennapage.com/henna/encyclopedia/mastersessay/chapter4masters.pdf>).

⁶ Cartright-Jones, Developing Guidelines on Henna: A Geographical Approach, Problems Created by Henna's Rapidly Changing Geographies <http://www.hennapage.com/henna/encyclopedia/mastersessay/chapter1masters.pdf>

⁷ Cartright-Jones, Menstruation and Henna: Pollution and Purification; Henna's role in Muslim Traditions Regarding Reproductive Blood <http://www.hennapage.com/henna/encyclopedia/HennaMenstruation.pdf>

⁸ Cartright-Jones, Where is henna grown, processed and exported in India? <http://www.hennapage.com/henna/encyclopedia/geography/indiahenna.html> and <http://www.hennapage.com/henna/encyclopedia/growing/Pakistan/>

⁹ Cvitanic, Henna: An Enduring Tradition, (<http://www.habiba.org/culture.html>).

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transcends time, religion and region. Ancient Indian brides adorned themselves with turmeric (yellow pigment) and kumkum (red pigment), while Arab and Persian brides decorated themselves with henna. These traditions gradually merged and fused. Nowadays, the Indian bride's feet and hands are decorated with beautiful, intricate henna designs¹⁰.

Henna dye is obtained from the dried leaves, which are powdered and mixed with oil or water and acidic ingredients such as yoghurt or alkaline ingredients such as lime. Temporary henna “tattoos” are readily available worldwide, last on the skin for several weeks and offer a self-limited, convenient alternative to a permanent tattoo.



Henna body art surged into the West following the 1998 release of Madonna’s music video “Frozen”, when the “Om” patterns on her hands were viewed by millions of people who had never seen henna before. “*You only see what your eyes want to see . . . you hold the key*”¹¹.



Traditionally, Indian henna art contains images of parrots, fish, peacocks, etc. It is started on the palm and covers full length of hand, then the entire backside of the hand. Arabian art depicts various types of big flowers and leaves on small thin branches. Henna has become a livelihood for many artists¹².

Medicinal Use

Henna leaves, flowers, seeds, stem bark and roots are used in traditional medicine to treat a variety of ailments such as cardiac disease, diabetes, diarrhea, fever, headache, jaundice, leprosy, leucorrhoea, rheumatoid arthritis, skin and venereal diseases, smallpox,

¹⁰ Desai, Mehndi Party, <http://www.hennapage.com/henna/what/freebooks/hinduwedding2.pdf>

¹¹ Madonna, *You only see what your eyes want to see*, <https://www.youtube.com/watch?v=XS088Opj9o0>

¹² Desai, Mehndi, <http://www.hennapage.com/henna/encyclopedia/indwed/desai/>

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spermatorrhoea and ulcers. Some studies have demonstrated henna deters some bacterial and fungal growth, and may have a localized analgesic effect¹³.

It was believed that applying henna prevented cuticles from splitting, and strengthened nails for rough village women's work, kept heels from cracking and relieved cuts and blisters. Women believed henna purified them and protected them from disease. In many communities, henna was also used to deter malevolent spirits and the Evil Eye¹⁴.

Henna flowers are fragrant and the perfume extracted was used in scents. In addition, the flowers were used in topical applications to bruises and the decoction as an emmenagogue that stimulates blood flow in the pelvic area and uterus and stimulate menstruation in treating hormonal disorders or conditions such as infrequent or light menses. Powered seeds with clarified butter are effective against dysentery¹⁵.

Seeds in powered form are good medicine for liver disorders and associated problems. The bark is applied in the form of a decoction to burns and scalds. It is given internally in a variety of affections, such as jaundice, enlargement of the spleen, calculus, as an alternative in leprosy and obstinate skin affections¹⁶.

¹³ Topical henna for capecitabine induced hand-foot syndrome, [Invest New Drugs](http://www.ncbi.nlm.nih.gov/pubmed/17885735), Apr;26(2):189-92 (2008), Epub Sep 21, 2007, (<http://www.ncbi.nlm.nih.gov/pubmed/17885735>).

¹⁴ Cartright-Jones, Menstruation and Henna: Pollution and Purification; Henna's role in Muslim Traditions Regarding Reproductive Blood <http://www.hennapage.com/henna/encyclopedia/HennaMenstruation.pdf>

¹⁵ Chaudhary *et al.* see above.

Kamal *et al.*, Pharmacological Activities Of Lawsonia Inermis Linn.: A Review, International Journal of Biomedical Research, Vol 1, No 2 (2010) (http://scholar.google.com/scholar?start=10&q=henna+herbal+medicine+Lawsonia+inermis+&hl=en&as_sdt=0,14).

Chengaiyah *et al.*, Medicinal Importance Of Natural Dyesa Review, International Journal of PharmTech Research, Vol.2, No.1, pp 144-154, (Jan-Mar 2010) (<http://jubilee101.com/subscription/pdf/Dyes/Medicinal-Importance-of-Natural-Dyes---11pages.pdf>).

Lei *et al.*, The Research Advances of Lawsonia Inermis (Henna), Journal of Qingdao University Engineering & Technology Edition (http://en.cnki.com.cn/Article_en/CJFDTOTAL-QDDX200402009.htm).

¹⁶ Chaudhary *et al.* see above.

Kamal *et al.*, Pharmacological Activities Of Lawsonia Inermis Linn.: A Review, International Journal of Biomedical Research, Vol 1, No 2 (2010) (http://scholar.google.com/scholar?start=10&q=henna+herbal+medicine+Lawsonia+inermis+&hl=en&as_sdt=0,14).

Chengaiyah *et al.*, Medicinal Importance Of Natural Dyesa Review, International Journal of PharmTech Research, Vol.2, No.1, pp 144-154, (Jan-Mar 2010) (<http://jubilee101.com/subscription/pdf/Dyes/Medicinal-Importance-of-Natural-Dyes---11pages.pdf>).

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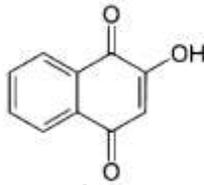
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The root is considered as a medicine for boils, gonorrhoea, herpes, and sore eyes. Cambodians drink a decoction made from henna root as a diuretic. Decoction of the root generally in combination with indigo is considered an abortifacient. The root is supposed to be useful in treatment of hysteria and nervous disorders¹⁷.

Henna is reported to contain carbohydrates, proteins, flavonoids, tannins and phenolic compounds, alkaloids, terpenoids, quinones, coumarins, xanthenes and fatty acids. Its core chemical components are 2-hydroxynaphthoquinone (lawsone), mannite, tannic acid, mucilage and gallic acid. About 0.5-1.5% of henna comprises lawsone, a bioactive ingredient due to its high protein binding capacity¹⁸.



Lawsone (2-hydroxy-1,4-naphthoquinone), also known as hennotannic acid, is a red-orange dye present in the leaves of the

ances of Lawsonia Inermis (Henna), Journal of Qingdao University Engineering & Technology Edition
[e en/CJFDTOTAL-QDDX200402009.htm](http://en.cjfdtotal-qddx200402009.htm).

- Kamal et al., Pharmacological Activities Of Lawsonia Inermis Linn.: A Review, International Journal of Biomedical Research, Vol 1, No 2 (2010) (http://scholar.google.com/scholar?start=10&q=henna+herbal+medicine+Lawsonia+inermis+&hl=en&as_sdt=0,14).
- Chengaiyah et al., Medicinal Importance Of Natural Dyesa Review, International Journal of PharmTech Research, Vol.2, No.1, pp 144-154, (Jan-Mar 2010) (<http://jubilee101.com/subscription/pdf/Dyes/Medicinal-Importance-of-Natural-Dyes---11pages.pdf>).
- Lei et al., The Research Advances of Lawsonia Inermis (Henna), Journal of Qingdao University Engineering & Technology Edition (http://en.cnki.com.cn/Article_en/CJFDTOTAL-QDDX200402009.htm).
- ¹⁸ Al-Rubiay et al., Antimicrobial Efficacy of Henna Extracts, Oman Med J. 23(4): pp 253–256 (Oct 2008) (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3273913/>).
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- Herbal medicine in ancient Egypt, Journal of Medicinal Plants Research Vol. 4(2), pp. 082-086 (8 January 2010) (http://jonnsaromatherapy.com/pdf/Aboelsoud_Herbal_Medicine_in_Ancient_Egypt_2010.pdf).
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*henna plant (Lawsonia inermis) as well as jewelweed (Impatiens balsamina)*¹⁹.

Henna has been reported to have hypoglycemic, hepatoprotective, immunostimulant, anti-inflammatory, antibacterial, antimicrobial²⁰, antifungal, antiviral, antiparasitic, antitrypanosomal, antidermatophytic, antioxidant²¹, antifertility, tuberculostatic²², anti-inflammatory, antipyretic, and analgesic²³, and anticancer²⁴ properties. There are numerous research publications and more than 200 patents and patent applications that have claimed henna for various uses²⁵.

Safety and Regulatory Information

Dermatologists regard henna as virtually harmless for use in coloring skin²⁶. Lawsonia in henna colors keratin in skin, hair, and nails, like tea stains fabrics and teeth²⁷. The longer henna treatment on the skin, the more color. Henna can be darkened with physical processes such as heat and wrapping, and chemical reactions with acid, lime and ammonia. Mixing an organic solvent such as alcohol may also darken henna²⁸.

¹⁹ <http://www.hennapage.com/henna/encyclopedia/lawsonia/>

²⁰ Babu et al., Antimicrobial Activities of Lawsonia inermis - A Review, Academic Journal of Plant Sciences 2 (4): 231-232, 2009 ([http://www.idosi.org/ajps/2\(4\)09/2.pdf](http://www.idosi.org/ajps/2(4)09/2.pdf)); Malekzadeh, Antimicrobial activity of Lawsonia inermis L., Appl Microbiol. 16(4): 663-664 (Apr 1968) (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC547491/>).

²¹ Modulatory effect of Henna leaf (*Lawsonia inermis*) on drug metabolising phase I and phase II enzymes, antioxidant enzymes, lipid peroxidation and chemically induced skin and forestomach papillomagenesis in mice, *Molecular and Cellular Biochemistry*, Volume 245, Issue 1-2, pp 11-22 (March 2003) (<http://link.springer.com/article/10.1023/A:1022853007710>).

²² Tuberculostatic activity of henna (*Lawsonia inermis* Linn.), *Tubercle*, Volume 71, Issue 4, Pages 293-295 (December 1990) (<http://www.sciencedirect.com/science/article/pii/0041387990900449>).

²³ Alia et al., Anti-Inflammatory, Antipyretic, and Analgesic Effects of Lawsonia inermis L. (Henna) in Rats, *Pharmacology*, 51:356-363 (1995) (<http://www.karger.com/Article/Abstract/139347>).

²⁴ Rahmat, Anticarcinogenic properties and antioxidant activity of henna (*Lawsonia inermis*), *J. Med. Sci*, 2(4), 194-197 (2002).

²⁵ US 4,183,366 A (01/15/1980) <http://www.freepatentsonline.com/4183366.html>.

²⁶ Cartright-Jones, Developing Guidelines on Henna: A Geographical Approach, Problems Created by Henna's Rapidly Changing Geographies <http://www.hennapage.com/henna/encyclopedia/mastersessay/chapter1masters.pdf>

²⁷ Cartright-Jones, Developing Guidelines on Henna: A Geographical Approach, Problems Created by Henna's Rapidly Changing Geographies <http://www.hennapage.com/henna/encyclopedia/mastersessay/chapter1masters.pdf>

²⁸ Cartright-Jones, The Techniques of Persian Henna, http://www.hennapage.com/henna/encyclopedia/Persian_Henna_Techniques.pdf

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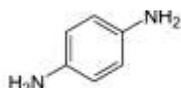
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Neutral henna, red henna and black henna are widely sold for blonde, red, and black hair. Only red henna is actually *lawsonia inermis*. Neutral henna is *cassia obovata*, and black henna is *indigofera tinctoria*. The dried powdered leaves of all of these plants appear very similar. Exporters of these hair dyes were reluctant to give away their trade secrets, and declarations of ingredients were not required during the early twentieth century. Additional confusion about henna comes from the addition of lead, copper, and iron sulfates and acetates, used to create other tones of hair dye. These are also usually undeclared ingredients in a package simply labeled "Henna." This confusion about what henna is and is not opened the way for the current problems for henna in the US. With para-phenylenediamine (PPD) added to henna and the subsequent problems with PPD allergies resulted in the ban of black henna as body art²⁹.

However, lack of understanding of henna, and misuse of the name to represent chemicals such as PPD as black henna, resulted in confusion for some Americans, as the God's judgment against alien/foreign/immigrant culture of henna³⁰. The henna leaf is harmless, but when mixed with poisons, it becomes poison³¹. It has nothing to do with Christian God's anger against other cultures. The addition of PPD, which is widely recognized as a sensitizer, increases the risk of allergic contact dermatitis from tattoo mixtures, and a number of cases of PPD allergy have been reported³². PPD is an organic compound used as a component of engineering polymers and composites and an ingredient in hair dyes.



Because henna typically produces a brown, orange-brown, or reddish-brown tint, other ingredients must be added to produce other colors, such as those marketed as "black henna" and "blue henna." Even brown shades of products marketed as henna may contain other ingredients intended to make them darker or make the color last longer on the skin.

²⁹ Cartright-Jones, see above

³⁰ Cartright-Jones, see above

³¹ Para-phenylenediamine "Black Henna" can harm you <http://www.hennapage.com/henna/ppd/index.html>.

³² Kang et al., Quantification of para-phenylenediamine and heavy metals in henna dye, Contact Dermatitis, Volume 55, Issue 1, pages 26-29 (July 2006) (<http://onlinelibrary.wiley.com/doi/10.1111/j.0105-1873.2006.00845.x/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false>).

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This unapproved use of a color additive makes these products adulterated and therefore illegal. An Import Alert is in effect for henna intended for use on the skin³³.

“In April, 1997, LOS-DO examined two shipments of a hair color product, brand names Zarqa and Almas, for color additives. Neither product has directions for use. However, the labels for both products declare henna as the sole ingredient and depict designs on the hands and feet. The color additive regulation 21 CFR 73.2190 specifically allows for the safe use of henna in coloring the hair only. The regulation does not allow for the safe use of henna to make colored designs directly on the skin, including the hands and feet.... The article is subject to refusal of admission pursuant to Section 801(a)(3) in that the article appears not to be a hair dye and it appears to bear or contain, for the purpose of decorating the skin, a color additive which is unsafe within the meaning of Section 721(a) [Adulteration, Section 601(e)].”³⁴

*"Earth provides enough to satisfy every man's needs, but not every man's greed." -
Mahatma Gandhi*

*Hinduism is a way of life, with diversity of religion, and Indian teachings share the
importance of seva (service).*

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*Om! Asatoma Sadgamaya, Tamasoma Jyotirgamaya, Mrityorma Amritamgamaya, Om
Shantih, Shantih, Shantih! (Aum! Lead the world from wrong path to the right path, from
ignorance to knowledge, from mortality to immortality and peace!)*

³³FDA, Temporary Tattoos, Henna/Mehndi, and "Black Henna"

(<http://www.fda.gov/cosmetics/productsingredients/products/ucm108569.htm#henna>).

³⁴ Import Alert 53-19, 03/19/2014 (http://www.accessdata.fda.gov/cms_ia/importalert_138.html).

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