

# AYURVASTRA – HERBAL CLOTHING

## (A new technology to heal naturally)

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### ABSTRACT

Ayurveda is the ancient medicine in India to treat many diseases by using herbs. Ayurveda is composed of two different words. These are Aye and Veda. Aye means life or lifespan and Veda means knowledge. When it combines the meaning is Science of Life or Wisdom of Life. The roots of Ayurveda dates back 1000 BC. This is only medicine available before the industrialization. Even today some parts of India believes that Ayurveda is the only answer to treat or to give relief for some diseases. Parts of the plant will be used for the treatment in Ayurveda. Adding the medicinal value to the fabric by dyeing the fabric in a dye prepared by Ayurvedic herbs and achieving the great results in treatment of many diseases is a great idea. A new technology launched and developed by the Directorate of Handloom, Department of Industries and Commerce and the Department of Dravyaguna Vijnan, Government Ayurveda College, Kerala, India, with a great view of giving medicinal value to the fabric, this herbal clothing is formally known as Ayurvasthra. Ayurvasthra is a term used in Sanskrit. Aye means life and Vasthra means cloth, when it combines, the meaning is life cloth. This article is to discuss about the new technology developed, different combination of herbs used to achieve different colors and specific medicinal values to the fabric and its achievements in treating different illness. Ayurvasthra is not only to treat the illness but also takes care of environment as the process is nontoxic and ecofriendly.

**Keyword:** - Ayurvasthra, Herbal clothing, Natural dyes.

### 1. INTRODUCTION: -

The word Ayurveda is composed of two different words. These are **Aye** and **Veda**. Aye means life or lifespan and Veda means knowledge. When it combines the meaning is Science of Life or Wisdom of Life. This alternative method of treatment originated more than 5000 years ago in India. Its core principles are rooted in the Vedas, which is an ancient book of Hindus. The Vedas date back to around 3000 BC. The science of life or Ayurveda dates back to around 1000 BC. The origins of Ayurveda are also found in the Atharvaveda. It contains incantations and hymns that cure various diseases through magic. It is believed that Ayurveda was received by Dhanvantri from Lord Brahma. Charaka Samhita and Susrutha Samhita are the oldest known and the most famous Ayurvedic texts. [1]. Until about 100 years ago, people in many parts of India were using various forms of natural dyeing in which they repeatedly dipped clothes in an herb based preparation after each wash. These natural dyes are free from toxins. [2].

The process of herbal dyeing was developed through extensive research during the age-old dyeing methods practiced since the days of the Indus civilization. Ayurvasthra is a term used in Sanskrit. **Aye** means life and **Vasthra** means cloth, when it combines the meaning life cloth. Herbs are used to create different colors. Depending on the plants or herbs used for various health benefits. Herbal cloth is used by the Ayurveda health clinics in the treatment of many diseases such as diabetes, skin infections, eczema, psoriasis, asthma, arthritis, rheumatism, cardiac problems, hypertension, high blood pressure and as general health problems. The natural/herbal fabrics are 100% organic, completely free of synthetic chemicals, toxic irritants and are biodegradable. The color of the fabric is derived from the medicinal preparation only that has specific health or wellness benefits proven by both traditional knowledge as well as clinical research. [3].

Ayurvastra is a new initiative launched by the Directorate of Handloom, Department of Industries and Commerce and the Department of Dravyaguna Vijnan, Government Ayurveda College, Kerala, aimed at creating a niche for the eco-friendly handloom fabric. [4]. An ayurvedic dye house has been set up by the Handloom Weavers Development Society (HLWDS), with aid from the Japanese Government, at Thumpode in Balaramapuram, Kerala. [5].

## 2. HOW AYURVASTHRA WORK: -

Skin has the ability to absorb environmental toxins; similarly it has ability to absorb herbs found in our natural dyes. These herbs release their medicinal qualities into the body and strengthen the skin's ability to block and resist harmful substances. [6]. Herbal Couture technology in Textile. Skin has the ability to absorb herbs found in our natural dyes. These herbs release their medicinal qualities into the body and strengthen the skin's ability to block and resist harmful substances. The herb-infused and herb-dyed organic fabrics act as healing agents, absorbed through the skin.

## 3. FABRIC USED TO MAKE AYURVASTHRA: -

Most common fabric used is organic cotton, the cotton which is cultivated without chemical pesticides and fertilizers. Silk, wool, coir, linen, hemp banana, nettle, bamboo etc. were too used to prepare Ayurvasthra.

## 4. HEALTH ADVANTAGES OF USING AYURVASTHRA: -

Each fabric is infused with specific herbs which are known to cure allergies Ayurvastra is extra smooth and good for transpiration that help in recovering various diseases. It may help to treat a broad range of diseases skin infections such as eczema and psoriasis the fabric also helps with conditions such as rheumatism, arthritis, blood pressure, diabetes and respiratory conditions, such as asthma, sleeping disorders. It also helps in boosting immunity. The Anti - bacterial and anti-inflammatory properties of Ayurvasthra extends its use as dressings and bandages. It can also relieve general body aches, stimulate weight loss, and strengthen the immune system. It can also be used as energy booster, mood enhancer, for overall well -being, calming, and blood purification and cooling. [7], [8]. The most effective time to wear Ayurvastra clothing is when the body is most at rest, such as during sleep, relaxation or meditation because this is when the body is naturally healing and re-establishing balance. Hence most of products from Ayurvastra are sleepwear, bed sheets, towels, meditation clothes and cotton mats. [8].

## 5. HERBS USED: -

Around 200 herbs are used to achieve various colors of Vastra clothing. Each color produced from a preparation that typically contains one or more pre-dominant plant/herb, like Turmeric in Turmeric clothing along with 40 or more others, which are specifically blended and carefully prepared medicinal herbs, plants, flowers, roots and barks.

### 5.1 Basic colors are achieved by

**Table -1: Colors and herbs**

Color	Plant
Red	Sandalwood, Safflower, Madder Root
Blue	Indigo, lime. Jaggery
Yellow	Pomegranate Rind, Turmeric, Marigold, Saffron
Orange	Safflower, Madder Root, Marigold
Green	Pomegranate, Indigo, Neem, Amaltas, Turmeric
Brown	Cateccu, Lai Kashish, Henna
Black	Iron Scrap, Jaggery, Peanut Oil, Castor oil

By using the basic colors (Blue, yellow, Red) all the other colors will be achieved. [7]. Depending upon herbs mixed in dye bath, fabric obtain different medicinal qualities. Diabetes has been observed to have been controlled by a

combination of the herbal dye with shoe flower, cumin seeds, champa flower and Mimosa pudica. Similarly curry leaves blended in the herbal dye are beneficial in curing arthritis; whereas sandalwood, turmeric and neem are beneficial in case of skin diseases. [9].

## 5.2 Few Herbs used to achieve medicinal qualities to the fabric: -

**Table -2:** Herbs and its medicinal values

Herb used	Medicinal quality of the fabric
Aloe vera	Skin Infections, and burns, Control Diabetes, Boosts Immunity, Anemia
Brajil wood	Blood purifier, improves complexion and cures various skin diseases
Catechu	To treat Pimples, Control Diabetes
Chirayata	Cures various skin diseases, anemia
Cumin (seed)	Its seed oil is effective against eczema, Control Diabetes
Golden Champa (Flower)	Relieves burning sensations in a variety of skin diseases ranging from allergic disorders to sores, Anemia
Castor (Oil)	Insect repellent properties, maintains temperature of the skin, easy in body transpiration.
Henna	Blood purifier, an anti-irritant, a deodorant, and an antiseptic. It is used for skin irritations such as heat rashes and skin allergies and to cool the body. Because of this cooling property, henna used as a prophylactic against skin diseases like burns, bruises, and skin inflammations, including sores from leprosy
Tulsi	Viral and bacterial infections. controls blood sugar levels, Boosts immunity
Amla	anti-fungal, anti-bacterial, anti-viral, Boosts immunity
Indian Mulberry	It is blood purifier and used for wound healing, Control Diabetes
Indigo	antiseptic, anti-allergic and helps fight skin disease
Turmeric	Anti-bacterial, anti-allergy, anti-septic and aromatic, anti-inflammatory properties. Controls Cholesterol, Helps reducing the insulin resistance, thus controls diabetes, Boosts immunity, anemia
Onion	Skin diseases, Control Diabetes
Arjuna	Cardio vascular support, Hyper tension
Fenugreek	Controls Cholesterol
Saffron	Controls heart disease
Indian Madder	It removes blood impurities and cures various skin diseases
Pomegranate	Anti-bacterial, anti-viral and astringent.
Sandalwood	Anti-septic, anti-inflammatory, Cools the skin, curing skin itching, burns
Neem	Controls skin diseases, controls blood sugar levels
Mimosa Pudica	controls blood sugar levels
Haritaki	Anti-septic, anti-inflammatory, Cures wounds and ulcers, anemia

All these herbs gives the magical healing quality to the dyed fabric or yarn [7], [10], [11].

There are many natural/ herbal products which show antimicrobial properties. Chitosan, one of the naturally occurring biopolymer. [12].

The extracts from different parts of diverse species of plants like roots, flowers, leaves, seeds, etc. exhibit antibacterial properties [13], [14].

Herbal compounds like phenolics, terpenoids, flavonoids, alkaloids, polypeptide, poly-acetylenes, etc. which are antimicrobial. Some of these act as bactericides and some acts as bacteriostatic [15].

The use of herbal medicated products helps to reduce the opportunity for contamination by biological toxins and infectious pathogens and therefore reduce the spread of diseases to other patients [16].

Fabric treated with, medicinal herbal extracts such as Ricinus Communis (leaves and seeds), Datura metel (leaves with fruits), Aloe Vera (flower), Abutilon indicum (leaves), Solanum surattense (Leaves), Coccinia grandis (Fruits and leaves), Aloe vera (leaves), Cardio spermum halicacabum (Leave), have been selected for finishing hundred percent cotton denim fabric using dip method. The finished fabrics have been tested for its antimicrobial activity using standard test method ENISO 206 45 and it is concluded that datura metel (leaves with fruits) have good antibacterial activity on the selected denim fabrics when compared to other herbs enhanced the wearing capacity of the denim fabric for an extended period without any skin/dermal irritations/infections and bad odor. [17].

Eco-friendly and renewable source of herbal treated medicated textile material to simple products which were free from chemicals, detergents and pollution. The results proved that the herbal medicated products showed good impact of relief and signs of cure ness. [18].

Cotton fabric dyed with dry rind of pomegranate showed prominent anti-bacterial activity and the medicinal quality of the fabric is up to ten wash cycles [19].

Hundred percent cotton woven/knitted fabrics were treated with the selected medicinal 16 medicinal herb extracts such as neem, turmeric, holy basil, sandal wood, etc. have been selected for curing 7 different diseases such as allergic dermatitis, psoriasis, asthma, liver disorders, headache, joints pain, sinus trouble/ cold. 7 different types of curative garments have been developed. The developed fabrics have been tested for its antimicrobial activity using standard test methods. The antibacterial assessments of the medicinal herb extracts treated fabrics and clinical trials have confirmed the correlation between the curative performance and its antibacterial activity. The curative of the garments in all the cases were found to be significant. Curative property of the herbal treated garment lasted for 10-15 washes [20].

## **6. DYEING PROCEDURE: -**

Natural fibers and organic cotton will be used to prepare Ayurvasthra. Dyeing process includes Bleaching, Desizing / Gumming, Mordanting, Dyeing (Medication), finishing [11].

### **6.1 Bleaching:**

The fabric or yarn is first bleached using cow urine, milk, honey, along with biodegradable, naturally derived, organic cleaning agents and surfactants like Saptala (Acacia sinuata), Phenila (Sapindus mukorossi) etc. [10]. The process ends with exposing the fabric or yarn directly to the sunlight.

### **6.2 Desizing / Gumming:**

The washing of fabric or yarn with natural mineral-rich water and sea salts to remove gums and oils. [11].

### **6.3 Mordanting:**

This is performed before dyeing the fabric or yarn to make the colors bright and fast by using natural mordants like Lodhra (Symplocos racemosa), Kenduka (Diospyrose ebenum), and fruit extracts of Haritaki (Terminalia chebula) etc. . [7].

### **6.4 Dyeing (Medication):**

The word medication is used instead of dyeing because the medicinal herbs are used to obtain required natural color to fabric or yarn. [21], [22].

The yarn or fabric is then medicated in a carefully controlled mixture of herbal medicine preparations called Kashayas (concoctions) depending upon the disease or ailment being treated. The temperatures of the dyes, the duration and number of the dye soaks, the blend of herbs, and even the equipment used carefully controlled. Required herbs are applied directly to the fabric with the help of natural ingredients, so as to keep the medicinal value of herbs intact. [7][11]. The fabric is left to dry for 3 days after dyeing in a shade and then kept in

a room for 15 days for "seasoning," a period of time that allows the fabric to dry completely and the Kashaya to settle in to the fabric. It is then washed and dried in the shade and kept for seasoning for another 15 days. [8].

### 6.5 Finishing:

Finishing is done by sprinkling pure water on the cloth and then stretching under pressure, using hand rolls, aloe vera, castor oil etc. . . . [7][11].

After the dying, residue will be recycled. The entire process is organic. It does not pollute the environment like synthetic dyes. Solid and liquid waste is separated through the process of filtration and used for farming purposes - as manure and for watering the fields and the waste is used as bio-manure and also to generate bio gas. [11].

## 7. AYURVASTHRA ADVANTAGES: -

- Ayurvasthra has positive results on improving health condition.
  - A clinical trial initiated by the Ministry of Health at the Government Ayurveda College in Thiruvananthapuram, Kerala, suggest that Medicinal Cloth does indeed work. For the study, patients suffering from rheumatism, allergies, hypertension, diabetes, psoriasis and other skin ailments were constantly exposed to ayurvedic herbs for 30 days through Medicinal Cloth clothing, bed linens, and mattresses. Walls, floors, and ceilings in the subjects' room were further lined with Medicinal Cloth coir mats. According to Dr. Vishwanathan, the former Dean of the Drug Research Department at Ayurveda College, the response was "remarkably good," especially in the cases of arthritis and skin ailments where the patients showed a "marked improvement."
  - The clinical evaluation of ayurvasthra conducted in 2005, and a study of therapeutic value of ayurvasthra conducted in 2006, By Government ayurveda college, Trivandrum under the supervision of the health department, Kerala, showed very positive results. [7].
- Use of herbal material in the process of dyeing , do not release any pollutants in the nature, thus the process is completely eco- friendly
- Use of herbal dyes improves the aesthetic quality of the cotton fabrics in eco-friendly way.
- Herbal fabrics are light and make for perfect breezy clothes. The best part of cotton herbal cloth is that it is super-cool in summer and warm in winter. [2]
- The shades produced by naturally developed dyes are unique
- The Unique flavor of the ayurvasthra enhances the mood
- People with allergies and chemical sensitivity especially benefit from organic cotton clothing, as conventional cotton may retain harmful toxic residues. Even if an individual don't have sensitive skin, organic cotton will just feel better against the skin. [10].
- Natural fibers and natural dyes used in preparation of ayurvasthra, allows its natural breakdown without damaging environment compared to the synthetic material which takes hundreds of years to breakdown and leaves pollutant material in soil.
- The production cost is low, hence the ayurvasthra price is less can be reached to many parts of the world. Ex: 1 kg of chemical dye costs 3500, whereas 1 kg of herbal dye costs Rs 150.

## 8. AYURVASTHRA DRAWBACKS:

- Natural Fabrics and dyes are poor substitutes for synthetic colors in terms of range and variations
- Washing care is very crucial to retain its color and its herbal benefits, Need be washed separately, preferably hand wash or gentle machine wash, need to be dried only in shades. Need to use bleach free detergents. This makes very difficult for the consumer.
- The process is very complex, time taking and each stage of the dyeing process need to be done in controlled conditions.
- As the colors are achieved only by using medicinal herbs, all colors can't be given to all the diseases. Hence consumer need to compromise on his/her color preference.
- Although Ayurvasthra showed positive results, they would not show quick results.

- Though there are no complaints on allergic reaction by the consumers, some people think that the ayurvasthra show side effects on children.

## 9. CONCLUSION:

Ayurvasthra has endless scope to capture the world market. The blend of Ayurveda and the textiles to achieve health in an eco-friendly manner is the great way of adopting the healthy life. Ayurvasthra is receiving the increased awareness all over the world. Ayurvasthra is one of the great solutions to revive and the increase the market of Indian handloom industry. Ayurvasthra is the answer to achieve good health in natural way.

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