

## VIJAYA A VERSATILE HERB OF PAST AND FUTURE – A CRITICAL REVIEW

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**ABSTRACT**

Cannabis sativa, commonly known as cannabis or marijuana, is a versatile herb that has been used for various medicinal and recreational purposes for centuries. In Ayurveda, an ancient Indian system of medicine, cannabis is referred to as "Vijaya" and has been used for its therapeutic properties in various health conditions. It has more than 200 formulations recommended for internal and external uses in Ayurveda. In recent years it has attracted many researchers around the world, as the therapeutic benefits of Cannabinoids for a number of medical conditions has been reported in numerous controlled clinical trials. This critical review aims to compile the information about the classical references, traditional uses, morphology and identification of Vijaya. This information could help in identification of Vijaya as well as exploring its potential in pharmaceutical preparations.

**KEYWORDS:** Vijaya, cannabinoids, traditional uses, morphology, Identification.**INTRODUCTION**

Vijaya has a rich history of been used for its medicinal purpose dating back to ancient times and has been mentioned in a classical texts. The active compounds in cannabis, known as cannabinoids, are believed to be responsible for its medicinal properties. The delta-9-tetrahydrocannabinol (THC), is a well-known cannabinoid responsible for the plant's psychoactive effects. Other cannabinoids, such as cannabidiol (CBD), have been found to have therapeutic properties without the psychoactive effects. Identification of authentic herbs is of prime importance in the preparation and usage of Ayurvedic formulations for the therapeutic purposes. Therapeutic potential of formulation is known to have a direct correlation with the quality of herbs used in the preparations. During our literature search we found that lot of efforts has been made towards the exploration of a different methodologies for the proper identification of Vijaya.

Vijaya is known to be used in various forms, like smoking, ingestion, and topical applications for its remedial purposes. It is often combined with other herbs to enhance its therapeutic properties and minimize any potential side effects it may produce. Vijaya has been reported to have a significant pharmacological benefits and has been used traditionally as Deepana (Appetizer),

Pachana (Digestive), Ruchya (Taste and digestion promoter), Madakari (Intoxication), Vyavayi (Pervades entire body without undergoing digestion), Grahi (Absorbent), Medhya (Improve memory and intellect), Rasayana (Rejuvenator) dravy. Vijaya based formulation are useful in various disease conditions like Grahani (Inflammatory Bowel disease), Jvara (Fever), Atisara (Diarrhoea), Agnimandya (Diminished digestive fire), Ajeerna (Dyspepsia), Shiroroga, Insomnia, Sotha (Inflammatory conditions), Shula (Colic) Medoraoga (Dyslipidemia) Prameha, Shwas (Dyspnea) Kasa (Cough) Hikka (Hiccups), Pandu (Anemia), Sheetpitta (Urticaria), Abhinyasa jvara (Meningitis) etc.<sup>[1]</sup> There are more than 200 formulations recommended for internal and external uses. However many of these formulations are not in use today.<sup>[2]</sup> Considering wide range of clinical applications, Vijaya has attracted attention of many researchers around the world. In this review we reported classical references, traditional uses, morphology and identification of Vijaya.

**MATERIALS AND METHOD**

A literature search was undertaken using Google scholar, Science Direct, MEDLINE, and a PubMed database. Many published articles relevant to Vijaya were screened and studied. Relevant information that was related to

search was kept and information which was not satisfying to the search was excluded.

## DISCUSSIONS

### Classical References

Vijaya is described under Upavisha group of drugs in Ayurveda. It is advocated to be used after following the shodhan process on Vijaya leaves. The shodhana process helps to remove the impurities and toxic contents from Vijaya leaves, thus helps to minimize the side effect associated with Vijaya and improves the overall therapeutic efficacy of a drug.<sup>[3-4]</sup> During the Vedic period (8000-1200 BCE) and Samhita period (1500 BC-600 AD) Vijaya was mentioned with the synonym "Soma". The pharmacological uses for different diseases can be traced in the Ayurvedic texts written during the medieval period /Nighantukar period (800AD – 1900 AD).<sup>[4]</sup> Nighantukar has kept Vijaya under various vargas (Table 1).

**Table 1: Classification of Vijaya in Nighantus.**

SN	Ayurvedic Text	Classification
1	Dhanvantari Nighantu	Guduchiyadi Varga
2	Shodhala Nighantu	Lakshmanadi Varga
3	Madanapala Nighantu	Haritakyadi Varga
4	Kaideva Nighantu	Aaushadhi Varga
5	Bhavprakash	Haritakyadi Varga
6	Saligram Nighantu	Ashtavarga
7	Priya Nighantu	Satapushpadi varga

Vijaya has also been mentioned in other important Ayurvedic texts like Sharangadhara Samhita, Sidhabahisaja Minimala, Rasayoga Sangraha, Rasendra Cintamani, Rasendra Sara Sangraha, Sahasra Yoga, Vangasena, Vridamadhava, Yoga Tarangin, Yogachintamani, Yogaratnakara, Rasa Kaumudi, Rasa Cintamani, Rasa Mangala, Rasa Prakasa Sudhakara, Rasaraja Sundara, Rasa Ratna, Samucchaya, Rasa Ratnakara Rasa Sangra, Rasa sanket kalika, Rasa Tarangini, Rasacandamsu, Rasakmadhenu, Rasamanjari, Rasamrta, Rasayna sara.<sup>[5-27]</sup> There are over 40 synonyms given to Vijaya in various ayurvedic texts (Table 2).

**Table 2. Synonyms attributed to Vijaya<sup>[28-38]</sup>**

SN	Characteristics	Synonyms
1	Based on mythological origin	Sivamoli, Sarkrasana, Siddhi, Siddhamuuli, Siddhida, Trailokya Vijaya, Bhangi, Vijaya, Divya, Kalaghni, Bhangika, Bhangaja, Pasupasavinasini, Indrasana,
2	Based on Pharmacognostical characters	Matulani, Matuli, Mohi, Samvida manjari, Bhrungi,
3	Based on Pharmacological actions	Bahuvadini, Ganja, Ananda, chhidalhada, Harsani, Madini, Mohini, Maadu, Ranjika, Tandrakrta, Manonmana, Matika, Mohini, Jaya Bhangaand, Bhangaja, Matkunakari, Sarvarogaghni, Sakrasana, Vimardini

### Traditional uses of Vijaya

In Ayurveda, cannabis sativa is primarily classified as a medicinal herb with various therapeutic properties. Its effects are believed to be influenced by its constituents, including cannabinoids such as tetrahydrocannabinol (THC), cannabidiol (CBD), as well as the other phytochemicals present in the plant. Here are some key Ayurvedic properties associated with cannabis sativa.

1. Rasa (Taste): Vijaya is considered to have a pungent (katu), bitter (tikta), and astringent (kashaya) taste.
2. Virya (Potency): It is hot in potency (ushna), which means it generates heat in the body.
3. Vipaka (Post-digestive effect): Post-digestive effect of Vijaya is considered as pungent (katu).
4. Gunas (Qualities): It possess lightness (laghu) and dryness (ruksha) qualities.
5. Dosha Effects: Vijaya increase Vata dosha and Pitta dosha, while potentially reducing Kapha dosha.

Vijaya has been traditionally used for various therapeutic purposes. Some potential applications includes.

1. Pain Relief: Vijaya helps alleviate pain, especially in conditions like arthritis, colic, neuropathies.

2. Nervous System Support: It has calming effect on the nervous system and could be used for conditions like anxiety, stress, insomnia Psychosis, and Urustambha, Acute transverse myelopathy.
3. Digestive Health: Cannabis might stimulate the appetite and aid digestion. It has been used traditionally in cases of loss of appetite, Diarrhoea, Irritable bowel syndrome, Dyspepsia and other digestive disorders. Krimi (helminthiasis/ worm infestation)
4. Respiratory Health: Vijaya have bronchodilatory properties and has been used for respiratory conditions like asthma, Hiccups, Bronchitis
5. Skin Conditions: Topical applications of Vijaya are used in skin conditions like urticaria, eczema, psoriasis.

It is indicated in few other conditions as well like fever, dyslipidaemia, Anaemia, Meningitis Prameha (Diabetes), Klaihya (Erectile dysfunction) and is used as rasanyana (adapto-immuno-neuro-endocrino-modulator).

### Taxonomy, Morphology and Identification of Vijaya

**Taxonomy-** Cannabis sativa is a flowering plant in the Cannabaceae family. It is classified into various

subspecies and strains, each exhibiting different characteristics, growth patterns, and chemical profiles. Here is a taxonomical description of *Cannabis sativa*.

Kingdom: Plantae

Subkingdom: Tracheobionta (Vascular plant)

Super division: Spermatophyta (seed plants)

Division: Magnoliophyta (flowering plants)

Class: Magnoliopsida (dicotyledonous plants)

Subclass: Hamamelididae

Order: Rosales

Family: Cannabaceae

Genus: *Cannabis*

Species: *Cannabis sativa*





*Cannabis sativa* is one of the three recognized species of the *Cannabis* genus, along with *Cannabis indica* and *Cannabis ruderalis*. Taxonomically, *Cannabis sativa* is characterized by its tall and lanky structure, narrow leaves with long and pointed serrations, and thin, fibrous stems.<sup>[39-40]</sup>


**Parameters used for the identification of Vijaya-** The identification of herbs is of paramount importance in Ayurveda. It enables practitioners to provide personalized and effective treatments, ensures patient safety, facilitates the creation of appropriate herbal formulations, and helps maintain the quality and integrity of Ayurvedic products. Botanical features, physical

examination (macroscopic and microscopic) colour tests and thin layer chromatography are considered as minimum analytical approach for the identification of Vijaya. Among these four analytical approaches botanical features and physical examinations are discussed in this review article.<sup>[40]</sup>

**Morphology of *Cannabis sativa*** - Laboratory and Scientific section of UNODC (United nations office on drugs and crime), Vienna has published a manual explaining the recommended methods for the identification and analysis of cannabis and cannabis products. It is an updated and significantly revised version of the manual on "Recommended methods for testing cannabis (ST/NAR/8), which was published in 1987. Morphology of *Cannabis sativa*, can vary depending on the strain and growing conditions. Vijaya plants can grow up to several meters tall, although some strains may be smaller and more bushy. Overall, the morphology of Vijaya characteristic of a tall, bushy plant with palmately compound leaves, small green flowers, and resin-rich buds. These features, along with the plant's distinct odour and flavour, have made Vijaya a popular plant for medicinal and recreational use throughout history.<sup>41-43</sup> Here are some of the key morphological features of Vijaya.

**Table 3. Macroscopic characteristics of Vijaya.**



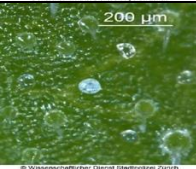

SN	Plant Part	Image	Characteristics
1	Leaves		Vijaya leaves are palmately compound, meaning that they have several leaflets that radiate from a central point. The leaves are typically serrated or toothed, and can range in size from a few centimetres to over a foot long.
2	Flowers	 Male flower      Female flower	Vijaya flowers are small and green, and are arranged in dense clusters or "buds" along the stem. The flowers are either male or female, with the female flowers producing the resin-rich buds that are used for medicinal or recreational purposes.
3	Stem		Vijaya stems are sturdy and woody, and can range in thickness from a few millimetres to several centimetres.
4	Fruit		The fruit commonly considered as a seed contains a single seed with a hard shell covered by the thin wall of the ovary. It is ellipsoid, brownish, smooth and slightly compress, about 2.5 mm long

5	Roots		Vijaya roots are fibrous and relatively shallow, with most of the root mass concentrated in the upper soil layers.
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**Microscopic characteristics of Vijaya-** Cannabis sativa plants are known for their abundant resin glands, or trichomes, which covers the leaves, stems, and flowers. When the leaves of cannabis sativum is seen under binocular microscope it is identified by the presence of hair like structures called trichomes. These trichomes produce the cannabinoids and other phytochemicals that give Vijaya its medicinal properties. There are two type of trichomes, Glandular and non- glandular. Glandular trichomes appears in different patterns as trichomes without stalk (Sessile glands), small bulbous glandular trichomes with one-celled stalks and as a long

multicellular stalks on the bracteoles surrounding the female flower. Non- glandular trichomes are numerous, rigid, unicellular, curved hair with pointed apex. Non glandular trichomes are further sub divided into Cystolith and Non- cystolith trichomes. Cystolithic trichomes are “Bear claw” shape trichomes found on the upper surface of leave with calcium carbonate crystals (cystolith) at their bases. Whereas, Non-cystolithic trichomes are found on the lower side of the leaves, bracts and bracteoles without calcium carbonate crystals at their bases.







**Table 4: Microscopic view of Trichomes.**

SN	Types of Trichomes	Image
1.	Cystolithic trichomes	
2.	Non- Cystolithic Trichomes	
3.	Sessile glands trichomes	
4.	Stalked glandular trichomes	

Several plant species bear morphological characteristics that show more or less resemblance to Cannabis sativa. However, a closer look at their macroscopic and microscopic characteristics makes identification easy. Along with physical examination other tests like colour test, TLC can be used for the identification and differentiation of cannabis sativa from other plants.<sup>[44]</sup>



**Table 5: Species resembling morphological characteristics to cannabis sativa.**

SN	Plant name	Image
1	Hibiscus cannabinus	
2	Acer palmatum	
3	Urtica cannabina	
4	Dizygotheca elegantissima	
5	Potentilla recta	
6	Datisca cannabina	

**CONCLUSION**

Vijaya has been used since Vedic period as a source of medicine in a variety of diseases. There are more than 200 formulations of Vijaya recommended for internal and external uses in Ayurveda. Vijaya was included in narcotic groups of plants in the 19<sup>th</sup> century, which has led to restricted use of this herb in medical formulations. In recent years it has seen a resurgence of interest because of its therapeutic applications. However, there is no collective information available at one place regarding the classical references, traditional uses and identification methodologies for Vijaya. Identification of the correct herbs ensures that the prescribed treatment is effective in addressing the individual's health condition. Each herb possesses unique properties, tastes, and energies, and only the right herbs can provide the desired therapeutic benefits. In this review article we compiled the comprehensive information about the classical reference, traditional uses and morphological identification of Vijaya. We hope this information will help in accurate identification of Vijaya, as a therapeutic agent.

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