

## Drug Review

In *Āyurveda*, *Auñadha* is considered as one of the four-fold constituent of *Cikitsā Catuñpāda*. *Auñadha* has been awarded the second place. The selection of proper drug in the management of disease is very important because proper drug will never deceive the physician in the path of success. The selected drug should act on disease as well as *Doña* involved. In *Āyurveda*, drug or diet articles that reverses or break the *Samprāpti* without producing any side effect is ideal. It is often the total effect of all the ingredients in the formula rather than the action of individual drugs that plays a vital role in therapeutics. Drug combination are envisaged to serve synergistic action, combined action, toxicity neutralization action and specific action.

In this trial *Çallaké* and *Ābhādi Cūrēa* were selected for the management of the patients suffering from *Sandhigatvaat*.

*Çallaké* is well-known and approved drug used in the patients of joint disorders especially *Sandhigatavāta*. *Ābhādi Cūrēa* is mentioned in *Yogratnaakar* for the treatment of joint disorders.

### 1. *Çallaké (Salaé Gugula, Kunduru)*

Reference: *Bhāvaprakāṣanighaëöu Karpürādivarga - 51,*

*Häréta Saàhitä Vätavyādhi  
Cikitsä - 73,74*

k...NÉémRxuriSt´Stlú[STvCy> kquhRret!,  
JvrSvedçhalúmlmuoraegk)ainlan!.

Éa0 à0 in0 kpURraidvgR / 51

Table No. 9

Ingredients of the trial drug *Ça llaké*

<i>Sr. No.</i>	<i>Name</i>	<i>Botanical name</i>	<i>Part used</i>	<i>Ratio</i>
1.	<i>Ça llaké</i>	<i>Boswellia serrata</i>	<i>Niryāsa</i> (Gum resin)	1

## 2. *Ābhādi Cūrēa*

Reference: *Yogarattanākara Vātavayādhi Cikitsā* /198-202

AaÉa rōa gufucl c ztavyaeR mhaE;xm!,  
ztpu:pa=ñgNxa c hpu;a v&ldark>.  
yvanl cajmaeda c smÉagain karyet!,  
sUúmcU[Rimd< k«Tva ibfalpdk< ipbet!.  
m\*Ema~srsEyUR;ESt³Eé:[aedken va pun>.  
AiSws<ixgt< vayu< ōayum¾aiit< c ym!,  
kiqϕh< g&Øsl— c mNyaStMÉ< hnuϕhm!.  
ye c kaeógtā raegaSta<í svaRNà[azyet!,  
AaÉa\*< nam cU[RNtu svRVyaixinbhR[m!  
#TyaÉa\*< cU[Rm!,  
(yae0 r0, vatVyaix icikTsa, 198 - 202)

Table No.10

Ingredients of the trial drug *Ābhādi Cūrēa*

<i>Sr. No.</i>	<i>Name</i>	<i>Botanical name</i>	<i>Part used</i>	<i>Ratio</i>
1.	<i>Ābhā</i>	<i>Acacia arabica</i>	Bark	1
2.	<i>Soëöha</i>	<i>Zingiber officinale</i>	Rhizome	1
3.	<i>Vidhārā</i>	<i>Argyrea speciosa</i>	Root	1
4.	<i>Açvagandhā</i>	<i>Withania somnifera</i>	Root	1

5.	<i>Guðücé</i>	<i>Tinospora cordifolia</i>	Stem	1
6.	<i>Häübera</i>	<i>Juniperus communis</i>	Fruit	1
7.	<i>Räsnä</i>	<i>Pluchea lanceolata</i>	Leaf	1
8.	<i>Çatävaré</i>	<i>Asparagus racemosus</i>	Root	1
9.	<i>Yaväné</i>	<i>Trachyspermum ammi</i>	Fruit	1
10.	<i>Saumpha</i>	<i>Foeniculum vulgare</i>	Fruit	1
11.	<i>Ajamodä</i>	<i>Carum roxburghianum</i>	Fruit	1

### Preparation of Trial Drug :-

1. **Çallaké:** *Çallaké Niryaäsa* was procured from open market and its quality was ensured in consultation with *Dravyaguaäa* dept. After purification the capsules were prepared following the standard GMP practice and Ayurvedic Pharmacopeia of India.
2. **Äbhädi Cürëa:-** Ingredients of trial drug i.e. *Äbhädi Cürëa* were procured from open market and their quality was ensured in consultation with *Dravyaguaäa* dept. Drug was manufactured following the standard GMP practice and Ayurvedic Pharmacopeia of India.

## **Çallaké<sup>109</sup>**

**Botanical name** -- *Boswellia serrata*

**Family** - Burseraceae.

**Classical names** - *Kundarü, Çallaké, Susravä, Gajabhakñyä.*

**Vernacular names** - **Eng.** Indian olibanum tree, **Hindi** - *Salaé*; **Beng.** - *Kundarü, Luban, Salaé*; **Guj.** - *Dhupdo, Saledo*; **Ka.** - *Guggula, Madi*; **Mal.** - *Parangisambarani, Kunturukkam, Samprani*, **Mar.** - *Salaé*; **Tam.** - *Parankisampirani*; **Tel.** - *Parangisambarani, Sambrani*; **Kon.** - *Vishesha dhoop*; **Oriya** - *Loban.*

**Botanical Description** - A medium to large size, deciduous tree. Upto 18m in height. Leaves imparipinnate, leaflets ovate or ovate-lanceolate, variable. Flowers small, white, in axillary racemes or panicles. Drupes 12 mm long, trigonous, splitting along 3 valves, scarlet red when young, turns white at maturity.

**Distribution** - Dry forests from Punjab to West Bengal and in peninsular India. Common at the foot of Western Himalaya, in Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Bihar, Orissa, Andhra Pradesh and further south in the Peninsula. Reported to be threatened in North Eastern Region of India.

**Parts used** - Bark, gum-resin

**Actions and uses** - The bark is sweet acrid cooling and tonic. It is good for asthma, dysentery, ulcers, haemorrhoids, and skin diseases. The gum resin is sweet, bitter, astringent, antipyretic, antidysenteric, expectorant, diaphoretic, diuretic, ecboic, antiseptic, stomachic and emmenagogue. It is useful in fevers, diaphoresis, convulsions, diarrhoea, dysentery, piles, urethrorrhea, orchiothy, bronchitis, asthma, cough, stomatitis, syphilitic diseases. Skin diseases, ulcers. Tumours, Goitre, cystic breast, chronic laryngitis, jaundice and arthritis. The gum resin shows anti-inflammatory and anti-arthritic activity and is used for rheumatic patients.

**Ayurvedic properties** -

**Ras** - *Kañāya, Téкта, Madhura.* (Gum resin - *Kaöu, Téкта*)

**Guëa** - *Laghu, Rükña* (Gum resin - *Téкта*)

**Vérya** - *Uñëa*

**Vipäka** - *Kaöu*

**Doshaghanta** - *Kaphapittaçämaka*

**Rogaghanatā** - Sandhivāta, Gaëdamälā, Pärçavaçüla, Jérävraëa, Pramehapiòikā, Netraroga, Mastiñadaurbalya, Mukhadurgandha, Agnimāndya, Atisara, Pravahikā, Grahaëé, Ādhmān, Arsha, Hādadaurbalya, Raktapitta, Jérëa Kāsa, Shwasa, Mootrakrichchhra, Püyameha, Shukradaurbalya., Pradara, Twakaroga, jeeranjawar, Daurbalya.

**Karma** - Shothahara, Vedanästhāpana, Durgandhanashana, Jantughana, Vranashodhana, Vranaropana, Chakshushya, Medhya, Deepana, Pachana, Grähé, Purishaviranhanjaniya, Vatanulomana, Hridya, Raktastambhana, Kaphanissaraka, Shleshmaputihara, Mootrala, Vrishya, Swedajanana, Jwarghana, Katupaushtika.

**Doses** - Bark decoction - 50 to 100 ml; Gum - 1 to 3 gm.

**Physical constants** - **Gum oleoresin** - Ash value - 1.32%; Acid insoluble ash - 0.30%; Water soluble extractive - not more than 20%; Alcohol (90%) soluble extractive - not more than 63%.

**Chemical constituents** - Serratol, 8 tetracyclic triterpene acids viz. beta boswellic acid, its 11- keto derivative and their acetates, 3 alpha and 3 beta hydroxytirucall - 8, 24-dien-21-oic acid, 3 alpha-acetoxytirucall-8, 24-dien-21- oic acid and 3-ketotirucall-8, 24-dien-21-oic acid are important chemical constituents reported form resin. The gum contains equimolar proposition of galactose, 2,3,4- tri-o-methyl galactose and galactonic phenyl hydrozide. Essential oil from gum-oleoresin contains camphene (0.12%), myrcene (0.40%), beta phellandrene (2.13%), alpha terpenene (5.56%), p-cymene (4.28%), bornylacetate (1.97%), and alpha terpenol (5.56%), in addition to the known alpha pinene (40.32%), beta pinene (10.43%), alpha phellandrene (1.71%) and limonene (1.61%).

**Pharmacological activities** - Anti-inflammatory, antiartherosclerotic, antiarthritic, sedative and

analgesic, hypotensive, antifungal, antibacterial, hypoglycaemic, anticancer and juvenominetic activity.

### **Äbhä<sup>110</sup>**

**Botanical name** -- Acacia Arabica

**Family** - Leguminosae (Mimosoideae)

**Synonyms** - **Eng.** Indian gum Arabic tree; **Sans.** - *Babbul, Yugmkanta, Sukshampatra* **Assamese** - *Babala*; **Guj.** *Baval, Kaloabaval*, **Hindi** - *Babula, Babura, Kikar*; **Kannada** - *Sharmeeruka, Kari Jail, Kari gobli, Pulai Jali*; **Kash.** - *Sak*; **Mal.**- *Velutha, Karuvelan*; **Mar.**- *Babhul, Babhula*; **Oriya**- *Babula, Babala*; **Tamil**- *Karuvelan, Karuvel*.

**Constituents**

The bark is used as most important tanning material of Northern India. The Gum is exuded from wounds in the bark, mostly during March to May. It occurs in the form of rounded or ovoid tears, known as Gum arabia. It is chiefly composed of galactoaraban and on hydrolysis give alpha arabinase and d-galactose but no xylose. Ash of Gum arabia contains arabic acid, Ca<sup>++</sup> - 52.2p.c. Mg<sup>++</sup> 19.7p.c. (Wealth of India-V-II)

**Morphology -**

*Ābhā* is a small tree. The bark is black or dark brown longitudinally fissured. Leaves are bipinnate 5-10cm in length, often furnished with glands. Flower are yellow, in globose heads, peduncles axillary, in Fascicles of 2 - 6, pods stalked, 7.5 to 15 by 1.3 to 1.6 cm. monoliform compressed, constricted at sutures between the seeds, densely and persistently grey downy, seeds in 8 - 12 number.

**Habitat and distribution**

Throughout the greater part in India, Ceylon, Baluchistan, Waziristan, Arabia, Egypt, tropical Africa, Nepal.

**Botanical description -**

It is perennial shrub or tree 2.5 - 10 m tall. Branches spreading, forming a dense or rounded crown with dark coloured stems; branchlets purple, shortly or densely pubescent with lenticels. Bark is thin rough, fissured, deep red-brown. Spines thin straight, light grey, in axillary pairs. Leaves bipinnate 30-40 mm long, often with 1-2 petiolar glands. Pinnae 2-11 pairs. Flowers prolific, golden yellow in globus heads.

**Parts used** - Bark, gum.

**Actions and uses -**

It is astringent, demulcent aphrodisiac, nutritive and expectorant, Bark is powerful astringent, pods are expectorant. Gum Arabic is styptic, tonic and astringent.

- The bark is acrid and hot, astringent to bowels anthelmintic, cure cough, bronchitis, diarrhea dysentery good in ascites.
- The Gum is astringent to bowels, anti-dysenteric, styptic cure biliousness. Vaginal and Uterine discharge, heal Fractures (Ayurveda).
- Gum is said to be very useful in Diabetes mellitus (Kritikar P. 922).
- Decoction of leaves is useful in spongy gums, relaxed throat and as wash in hemorrhagic ulcers and wound.

**Ayurvedic properties -**

**Rasa** - *Kañāya*.

**Guëa** - *Gurü, Rükña, Viñad*.

**Vérya** - *Çéta*

**Vipäka** - *Kaöu*

**Doñaghanatä** - *Kaphaghana*.

**Rogaghanatä** - *Kustha, Krimiroga, Atisara, Kasa*

**Karma** - *Grähé, Kaphahara, Viñaghana*

**Dose -**

*Tvaka Kvätha* (decoction) - 50 - 100 ml.

Fruit powder - 3-6 gm.

*Niryäsa* - 3-6 gm.

**Physical constants** - Foreign matter - Not more than 2%; Total Ash - Not more than 15%, Acid-insoluble ash - Not more than 2%; Alcohol-soluble extractive - Not less than 6%, Water-soluble extractive-Not less than 4%

**Chemical constituents** - Tannins and gum

**Yoga**

*Babbulatishta, Lavangadi vati, Abhadi churan, Tryodhanga Guggulu.*

### **Çuëöhé<sup>111</sup>**

**Botanical name** - Zingiber officinale

**Narutal order** - Zingiberaceae

**Synonyms** - Çuëöhé, Nägara, Maha-aushadha, Vishwabheshajya, shringabera, katubhadra, Ardrika, Ardraka

#### **Botanical Description**

Perineal herb, rhizome stout, tuberous with erect leafy stem 60 - 90 cm tall. Leaves sessile, linear, lanceolate, 10.25 \* 1.5 - 3.0 cm narrowed to the base, acute of acuminate, sheath 10 - 15 cm long. Flowers greenish with a small dark purple lip, in oblong cylindrical spikes. Fruits oblong capsules.

**Distribution -**

It is cultivated throughout the sub- Himalayan tracts of Uttar Pradesh, occasionally cultivated in Bihar and Orissa, West Bengal, Himachal Pradesh, Madhya Pradesh, Gujarat, Deccan, Karnataka, and Kerala and run wild in some places in western Ghats.

**Parts used** - Fresh rhizome (*Ārdraka*) and dried rhizome (*Çuëöhé*)

**Preparation of Shunthi**

After the flowers have disappeared and stems have withered Zinger is ripe for collection. The green is first sun dried, cleaned with soap water. The outer skin is scrapped off and scraped Zinger washed and again sun dried. Dried Zinger is of two kinds. Peeled and unpeeled.

**Actions and uses:**

The raw ginger is acrid, therogenic, crminative, laxative, and digestive. It is useful in anorexia nervosa, coryza, fever, bronchial asthma, cough, diarrhea, dyspepsia, diseases of pharynx, inflammation, oedema, urticaria, and earache.

The dry ginger is emollient appetizer, laxative, stomachic, stimulant, rubefaciant, anodyne, aphrodisiac, expectorant, anthelmintic, and carminative. It is useful in fever, dropsy, otalgia, cephalgia, asthma, jaundice, cough, hiccough, colic, diarrhea, flatulence, anorexia, dyspepsia, piles, cardiac disorders, diseases of pharynx, hyperacidity, abdominal pain, vomiting, elephantiasis, inflammations and rheumatoid arthritis.

**Ayurvedic properties**

**Rasa** - *Kaöu*

**Guëa**- *Laghu, Snigdha, (Çuëöhé), and Guru, Rükña, Téknëa (Ārdraka)*

**Vérya**- *Uñëa*

**Vipäka** – Madhura

**Doñaghanatä** – Vätakaphaçämaka

**Rogaghanatä** – Ämaväta, Sandhishotha, shaitya, Avasada, Çohta , Vatavyadhi, Katishoola, Aruchi, Hrilla, Chhardi, Agnimandya, Ajeerna, Koshtavata, Adhmana, Grahaëé, Gulma, Udarashoola, Anaha, Vibandha, Arsaha, Hådadaurbalya, Hridroga, Shleepada, Sheetapitta, Kantharoga, Käsa, Shwasa, Hikka, Pratikshyaya, Kshataksheena, Vishamajawara, Jeernajwara, Samanaya, Daurbalya, Prasnattara, daurbalya, Karnashoola.

**Karma** – Sheetaprashamana, Shothahara, Vedanästhäpana, Naudiuttejaka, Vatashamaka, Rochana, Deepana, Pachana, Triptighana, Vatanulomana, Shoolaprashamana, Arshoghna, Bhedana, Grähé, Hridya, Svavya, Shleshmahara, Vridhya, Uttejaka, Jwaraghna.

**Dose** – Juice :- 5 to 10 ml; Powder : 1 to 2 gm.

**Physical constants:** Fresh rhizome – total ash – Not more than 87%; Acid insoluble ash: not more than 1%; Alcohol soluble extractive – not less than 5%; Water soluble extractive – not less than 2%; Moisture content – not more than 90%. Dried rhizome – Total ash – Not more than 6%; water soluble ash – not less than 1.5%; Alcohol (90%) soluble extractive – not less than 3%; water soluble extractive – not less than 10%.

**Chemical constituents:**

Heptane, octane, isovaleraldehyde, nonanol, ethyl pinene, camphene, beta-pinene, sabinene, myrecene, limonene, beta farnesene, linalool, beta-sesquiphellandrene, gingeraol, zingerone, shogaol, dihydrogingeol, hexahydrocurcumin (essential oil), gingerone, diacetoxy-1-(3,4-dimethoxy phenyl) decane, sesquithujene, nerol, 1,8-cineole, neral, geranial, gingerol, (root); aspartic acid, threonine, serine, glycine, cysteine, valine, isoleucine, leucine and arginine.

**Pharmacological activities** - anti-inflammatory, hypolipidaemic, antiatherosclerotic, antiemetic, antiulcer, antiplatelet, antipyretic, cardiovascular, antioxidant, antibacterial, antifungal, analgesic, antidepressant, hepatoprotective, hypoglycaemic, inotropic, inhibition of prostaglandin release (dose dependent).

### ***Vidhärä*<sup>112</sup>**

*Vidhärä* is the colloquial name of Sanskrit *Vridhadaruka*. In *Ayurvedic* literature viz. *Caraka* and *Suçruta Saàhitä*, it has been referred under name *Adhoguda*, *Mahasyama*, and *Syamo*; it is used in the conditions where purgative action is required.

**Botanical name** - *Argyrea speciosa* sweet

**Family** - Convolvulaceae.

**Synonyms** -

**Sanskrit** - *Rksagandha*, *Rsyagandha*, *Chagalantri*, *Ajantri*, *Chagalantrika*, *Bastanrti*, *Antrabasta*, *Avegi*, *Vrddhadarakah*, *Vrddardaruh*, *Vrddadarah*, *Ajara*, *Jugah*.

The name *Ajara* means as that one which destroys *Vardhakyä* (old age) and keeps one young by strengthening the body and preventing the effects of old age.

**Regional names** - **Eng.** - the elephant creeper, **Beng.** - *Bicktarak*, *Guguli*; **Gujra.** - *Samandar Sosha*, *Vardhora*,

*Bidhara, Ghaopatta, vidhara; Hindi - Samandar ka pal, Samundar, Samandarsokh; Mal. - Samudra-pac-chha, Samundra yogam, Samudra-phala; Mar. - Samudrasoka, shokh; Santal - Kedok arak, Tamil - Sanudrapala, Chandra-poda, kokkita;*

**Botanical description** (Morphology) - Extensively climbing, stem stout, white tomentose, Leaves large ovate-cordate, 7.5-3.0 by 6.3-25 cm. Ovate, acute, glabrous, beneath, peduncles long, Flowers sub-capitate cymes, Peduncle 7.5 - 15 cm. long stout, white tomentose, bracts large ovate-lanceolate, acute, thin softly wooly deciduous, calyx white tomentose outside. Sepals nearly 1.7 cm. long oblong elliptic obtuse, Corolla 5 - 6.3 cm long tubular infundibuliform the bands silky pubescent outside tube somewhat inflated, white pubescent outside, rose purple and glabrous inside, ovary glabrous for 2 cm. diameter globus apiculate. Fruit brown yellow. Stout nearly dry.

**Habitat & Distribution** - Found from Assam to Belgaum and Mysore. Frequent in Bengal plains. Also distributed in Java, also China, Mauritius.

**Parts used** - Root.

### **Properties**

**Rasa** - *Tékta, Kaöu, Kañäya*

**Guëa** - *Laghu, Snigdha.*

**Vérya** - *Uñëa.*

**Vipäka** - *Madhur.*

### **Chemical composition -**

Tannin and Amber - Coloured acid -resin soluble in ether, benzene and partly soluble in alkalines.

### **Actions and uses**

It is *Vätakaphaçämaka*. Root is bitter Aphrodisiac Diuretic, *Çothahara, Digestive, Agnidépaka* (Sharma P.V.)

- The root is useful in gonorrhoea, Strangury and chronic Ulcer (Yunani).
- It is also useful in Rheumatoid affection and disease of nervous system. The leaves are Maturative and absorptive and are used as emollient Poultices for wound and externally in skin disorders. In synovitis, powdered root is given with milk mixed with vinegar the sap is rubbed over the body to reduce obesity. The leaves are used as a local stimulant and rubefacient. In lakhipur the tuber in the form of a paste is applied externally in abscess of stomach.
- It is also used in *Vätavyadhi, Āmavāta, Arça, Çoṭha, Prameha*, (Sharma P.V.)

**Doses** - Root Powder 3-6 gm.

**Yoga** - *Vraddha darukasama Churan, Ajmodadi Churan, Ashadi Churan.*

### **Ashwgandha**<sup>113</sup>

**Botanical name** - *Withania somnifera*.

**Family** - Solanaceae.

**Classical names** - *Açvangandhä, Vārāhakarëé, Varada, Balada, Kushthagandhini, Hayahvaya, Turgagandha, Vajigandha,*

**Vernacular names** - **Eng.** - Winter cherry, **Hindi** - *Āsagandha, Punir*, **Beng.** - *Açvangandhä, Kaknuj*. **Guj.** - *Ghodakun, Ghoda, Asoda*, **Kan.** - *viremaddinagaddi, Kiremallinagida, Yiremaddinagadde*. **Mal.** - *Amukkuram*, **Mar.** - *Askandha, Asvagandha, Kanchuki*. **Punj.** - *Asgand, Isgand, Aksan, Vaman, Nagauri*. **Raj.** - *Chirpotan*. **Tam.** *Amukkira, Amukkirakkilangu, Amulang Kalung, Aswagandhi*. **Tel.** - *Vajigandha, Pennirugadda, Pulivendramu, Penneru*, **Arab.** - *Kaknajehini*, **Oriya** - *Asua-ganaha*. **Par.** - *Kaknajehindi, Mebernanbarari*, **Urdu** - *Asgandanagaori*.

**Botanical Description (Morphology) :-** A branched erect, Tomentose shrubs, 30 - 150 cm high, branch terete Roots stout, fleshy, whitish brown. Leaves 5 - 10 by 2.5 to 5 cm simple, ovate. Flowers inconspicuous, greenish or lucid-yellow, in axillary, umbellate cymes usually 5 together in a sessile or nearly sessile umbellate cyme. Berries small, smooth 6 mm diameter, globose, orange-red when ripe, enclosed in the persistent calyx. Seeds yellow, 2.5 mm diameter, reniform.

**Habitat & Distribution:** it is found throughout the drier parts of India in waste places and on bunds, in areas of Upper Gangetic plain, West Bengal, Bihar, Orissa, Gujrat, Konkan, Deccan, Karnataka and Coimbatore at 5000 ft. height. It is cultivated in Mandsaur, M.P. at a large scale. Flowering occurs in winter session. This plant is found in five varieties.

**Parts used -** Root, Leaf, Seed.

**Actions and uses -** it is *Vätapitta Çämaka*. The roots are astringent, bitter, acrid, alexipharmic, somniferous, thermogenic, stimulant, aphrodisiac, diuretic, deobstruent, and tonic. They are useful in leukoderma, constipation, insomnia, **lumbar pain**, nervous disorders, asthma, cardiac disorders, psoriasis, consumption, ulcers, carbuncles, scabies, marasmus of children, senile debility. Leaves are bitter and recommended in fever, **painful swellings**, inflammation of eye, syphilitic sores, haemorrhoids, tumours, tuberculous glands, seeds are reported to be diuretic, hypnotic and are employed to coagulate milk. *Nägore Äsagandha* is **Çothahara**, Aphrodisiac, *Balya*, Nervine tonic **Çülapraçämaka** (Analgesic), blood purifier, Antihypertensive, *Çväsahara*, Uterine sedative, diuretic.

**Ayurvedic properties -**

**Rasa -** *Tékta, Kaõu, Madhura*.

**Guëa -** *Laghu, Snigdha*.

**Vérya** - Uñëa

**Vipäka** - Madhura

**Doshaghanta** - Kaphavätaçämaka

**Rogaghanata** - Galaganda, Granthishaotha, Daurbalaya, Vatavyadhi, Urustambha, Murchchha, Bhrama, Anidra, Udaravikara, Krimi, Raktabharadhikya, Raktavikara, Çotha, Käsa, Shwasa, Shukradaurbalya, Pradara, Yonishoola, Mootraghata, Shvitra, Kushtha, Kañäya, Balashosha, Shosha.

**Karma** - Çothahara, Vedanästhäpana, Mastishkashamaka, Dépana, Anuloman, Çülapraçamana, Krimighana, Raktshodhaka, Kaphaghana, Shwasahara, Vajikarana, Garbhashayashothahara, Yonishoolahara, Mootrala, Kushthaghna, Balya, Brinhana, Rasayana.

**Dose** - Root powder :- 3 - 6 gm

**Physical constants** - Foreign organic matter - not more than 2.0%; Ash - not more than 7.0%; Acid insoluble ash - not more than 1.2%; Alcohol soluble extractive - not less than 20.0%; Alcohol soluble matter - not less than 16.0%.

**Chemical constituents** - Withanolide along with withaferin A and dihydrowithaferin A<sub>2</sub> (seeds); visamine (plant); anaferin; withaferin A isomer; a pyrazole alkaloid-withasomnine, C-28 steroid lactone, characterised as 5, 20 alpha - dihydroxy - 6alpha, amino acids include proline, valine, tyrosine, alanine, glycine, hydroxyproline, aspartic acid, glutamic acid, cysteine and cysteine (berries) and fatty acids (seed oil) etc.

**Pharmacological activities** - Hypotensive, Bradycardiac and respiratory stimulant, antibacterial, hypothermic, immunosuppressive, immunostimulatory, immunomodulatory, adaptogenic, antitumour, radiosensitising, antistress, anticonvulsant, psychotropic, CNS depressant, antioxidant, **anti-inflammatory**, antispasmodic, **analgesic**, antipyretic, antiviral, **antiarthritic**, sedative, cardio-

tropic, cardio protective, anticoagulant, antiageing, cytoprotective.

In local application is useful in *Granthi Çoṭha*, Goiter, and Medicated oil is useful in *Vätavyadhi* and *Agnidaurbalya*.

The root powder with milk and sugar is specially indicated in *Bälaçoña*, *Kañäya Roga* (Malnutrition in children).

It is useful in Leucorrhoea and backache.

The wild species is useful in depression, oligospermia.

**Yoga** -

*Ashwagandha churan*, *Ashwagandha rasayan*,  
*Ashwagandharishta*,  
*Tryodhang guggulu*.

### **Guòücé<sup>114</sup>**

**Botanical name** - *Tinospora cardifolia*

**Family** - Menispermaceae

**Classical names** - *Guòücé*, *Madhuparni*, *Amrita*, *Amritavallari*, *Chhinnaruha*, *Chinnodbhava*, *Tantrika*, *Kundalini*, *Chakralakshanika*, *Somavalli*, *Dhira*, *Vishalya*, *Rasayani*.

**Vernacular names** - **Eng.** - *Gulanča tinospora*, **Hindi** - *Gulanča*, *Giloya*, *Amrita*, *Gulneha*, *Gulbel*, **Beng.** - *Golanča*, *Giloe*, **Guj.**-*Gulvel*, *Galo*, **Kan.**-*Amrutaballi*, *Yuganiballi*, *Mandhuparni*, **Mar.** *Gulvel*, **Punj.** - *Gilo*, **Tam.** - *Amrutavalli*, *Seendal*, **TeL.** - *Thippatega*, *Anruta*, **Arab.** - *Gilo*, **Assam** - *Siddhilata*, *Amarlata*, **Kash.** - *Amrita*, *Gilo Oriya* - *Gulochi*, *Gulanča*, **Urdu** - *Gilo*.

**Botanical Description (Morphology)** -

Large, glabrous, deciduous, climbing shrubs. Stems are rather succulent with long filiform fleshy, aerial roots from the branches. Bark grey brown or creamy white, watery, Leaves broadly ovate, long petiolate, membranous, cordate with a broad sinus. Flowers small, yellow or greenish- yellow, appearing when the plant is leafless, in axillary and terminal racemes or racemose panicles; male flowers clustered, females usually solitary. Drupes ovoid or sub-globose, glossy, red, pea sized. Seeds white, bean shaped, warty.

#### **Habitat & Distribution**

Found throughout tropical India, from Kumaon eastwards as well as southwards upto Sri Lanka.

**Parts used** - Root, stem, leaf.

#### **Actions and uses**

The stem is bitter, astringent, sweet, thermogenic, anodyne, anthelmintic, alterant, antiperiodic, antispasmodic, **anti-inflammatory**, antipyretic, antiemetic, **digestive**, carminative, appetized, stomachic, constipating, cardiotoxic, depurative, haematinic, expectorant, aphrodisiac, rejuvenating, galacto-purifier and tonic. It is useful in burning sensation, hyperdipsia, helminthiasis, dyspepsia, vomiting, flatulence, acid gastritis, jaundice, haemorrhoids, menometrorrhagia, intermittent fevers, tonic, fevers, inflammations, gout, cardiac debility, skin diseases, leprosy, erysipelas, anaemia, cough, asthma, general debility, seminal weakness, urinary disorders, splenomegaly, rheumatoid arthritis. The whole plant, well ground, is applied on fractures, Starch for roots and stems is useful in acid diarrhoea, due to acidity of intestinal canal or acid dyspepsia. It is useful in relieving the symptoms of rheumatism. Juice from fresh

plant is useful as diuretic. Leaves are useful in jaundice.

It is *Vātaçāmaka* with *Ghee*, *Pittaçāmaka* with sugar, *Kaphaçāmaka* with *Madhu* (Honey).

**Ayurvedic Properties**

**Rasa** - *Tékta*, *Kañāya*.

**Guëa** - *Guru*, *Snigdha*

**Vérya** - *Uñëa*

**Vipāka** - *Madhura*

**Doñaghanatā** - *Tridoñaçāmaka*

**Rogaghanata** - *Kushtha*, *Vatarakta*, *Netraroga*, *Trishna*, *Daha*, *Chhardhi*, *Aruchi*, *Agnimandya*, **Çüla**, *Yakridvikara*, *Kamala*, *Amlapitta*, *Pravahika*, *Atisara*, *Raktatisara*, *Grahaëé*, *Krimi*, *Arsha*, *Hådadaurbalya*, *Pleehavriddhi*, *Vastishotha*, *Raktavikara*, *Amavata*, *Pandu*, *Shwasa*, *Kāsa*, *Shukradaurbalya*, *Prameha*, *Madhumeha*, *Mootrakrichchra*, *Kushtha*, *Visarapa*, *Twagroga*, *Phiranga*, *Jwara*, *Vishamajwara*, *Jeeranjwara*,

**Karma** - **Vedanāsthāpana**, *Kushthaghna*, *Trishnanigrahana*, *Chhardinigrahana*, **Dépana**, **Pācana**, *Pittasaraka*, *Anulomana*, *Sangrahi*, *Krimighna*, *Hridaya*, *Raktashodhaka*, *Raktavardhaka*, *Kaphaghna*, *Vrishya*, *Balya*, *Pramehahar*, *Moortajanana*, *Jwaraghna*, *Dahaprashamana*, *Rasayana*.

**Dose** - Decoction: - 50 - 100 ml.; Powder: - 3 - 6 gm;  
**Sattva** :- (starch from roots and stem) - 1-2 gm.

**Physical constants** - Foreign matter - Note more than 2%; total ash - not more than 16%; Acid insoluble ash - not more than - 3%; Alcohol soluble extractive - not less than 3%; Water soluble extractive - Not less than 11%.

**Chemical constituents** - *Tinosporine*, *tinosporon*, *tinosporic acid*, *tinosporol*, *tinosporide*, *tinosporidine*, *columbin*, *chasmanthin*, *palmarin*, *berberine*, *giloin*,

giloinsin, 1,2-substituted pyrrolidine, a diterpenoid furanolactone, 18-norclerodnaediterpene-0-glucoside, aryltetrahydrofuranolignan, octacosanol, nanocosan-15-one and beta-sitosterol, cordifolide, unosporin, heptacosanol, cordifol, cordifolon, magnoflorine, tembetarine, cardiofoliosides A & B, phenolic lignin-3-(alpha,4-dihydroxy-3-methoxybenzyle)-4-(4-hydroxy-3-methoxybenzyle) - tetrahydrofuran, arabinogalactan (various parts)

**Pharmacological activities** - Hypoglycaemic, antihyperglycaemic, CNS depressant, antibacterial, antimicrobial, antipyretic, **anti-inflammatory, anti-arthritic,** hepatoprotective, analgesic, immunosuppressive, immunostimulant, antineoplastic, antistress, antidiabetic, antitumour, adaptogenic, antileishmanial, antioxidant, antiendotoxic, hypotensive, diuretic.

### **Häpuñä / Haubera<sup>115</sup>**

**Botanical name** -- Juniperus communis linn.

**Family** - Cupressaceae / Pinaceae.

**Classical names** - Häpuñä, Havusa, Vigandhika

**Synonyms** - Aparajita, Ashvathaphala, Atigandhika, Dhamkshnashini, Habusha, Kanchhughni, Kaphaghni, Matsyagandha, Plihanantri, Pleehashatru, Svalpaphala, Vipusha, Vishaghni, Visra, Visragandha.

**Vernacular names** - **Eng.** - Juniper, Common Juniper, Juniper berry, **Hindi,** - Aaraar, Haubera, Abhal, Havuber, Havubair, **Beng.** - Havusha, Hayusha, **Guj.** - Palash, **Kan.** - Padma, beeja. **Mar.** - Hosha, **Punj.** - Langshur. Lassar, Lewar, Nuch, Pama; **Tel.** - Hapusha; **Arab.** - Abhal, .

*Habbul, Aarwar; Assam - Arar, Abahal, Habbul, Kash. - Benthā, Betar, Nuch, Pethri; Pers. - Hab-ul-ushara; Urdu - Abahal, Saru, Aarar.*

**Botanical description** (Morphology)- An evergreen dense diffuse, dioecious, shrub or a bush, 60 - 150 cm high, with upright branches. Leaves in whorls of 3, persistent, sharp pointed, scented, spreading or erect, linear, 5 - 13 mm long, base narrowed, upper surface pale or bluish-white, concave, lower green, convex. Catkins axillary. Male and female flowers are born on separate trees, flowers axillary. Fruit glabose berries, blue-black, 1.5 - 2 cm dia., glaucous, with scarious empty scales at the base. Seeds usually 3, ovoid. Flowering : March - April; Fruiting : Ripen in August-September or the second year.

**Distribution** - Found in north west of Himalayas from Kumaon Westwards at an altitude of 1600 - 4600 m. In Himachal Pradesh it is found in *Chhota* and *Bara Bhangal, Kullu, Chounti, Kalga Pattan, Chansil, Chheradhank*. Distributed in temperate and subarctic Europe, Asia, North Africa, North America; Commercially cultivated in Hungary, Czechoslovakia, Yugoslavia and America.

**Parts used** - Bark, wood oil, Fresh ripe berries.

**Actions and uses** - Fruit is carminative, stimulant, styptic, aromatic, stimulant, emmenagogue, **digestive**, diuretic, disinfectant, antiseptic, and are useful in chronic bright's disease, dropsy, asthma, cough, respiratory affections, migraine, **rheumatic and painful swellings**, nephrotic dropsy of children, catarrh, gonorrhoea, pulmonary blennorrhoea, **arthritis**, amenorrhoea, diabetes, infantile tuberculosis, bladder affections, chronic pyelonephritis, dysmenorrhoea, piles and abdominal disorders. It is employed in gout, **rheumatism** and cutaneous diseases. Fruits are beneficial in scanty urine, locally **rheumatic swellings** and certain skin affections, the plant is used as appetized, carminative, anthelmintic, alexipharmic, laxative, useful in diarrhoea,

abdominal pains, strangury diseases of the spleen and vaginal discharges.

**Ayurvedic Properties -**

**Rasa** - *Kaöu, Téкта.*

**Guëa** - *Laghu, Rükña, Téknëa.*

**Vipäka** - *Kaöu.*

**Vérya** - *Uñëa.*

**Doshghnata** - *Kaphavätaçämaka.*

**Karma** - *Sangrahi, Vrishya, Virechaka, Ashmaribhedan, Santarpana, Vasti, Lekhana, Çothahara, Vranaropana, Admanahara, Uttejaka, Dé pana, Anulomana, Krimighna, Upasarganashaka, Rasayans, kaphanissaraka, Artavajanana, Garbhashaya, Mootrajanana, Swedajanana.*

**Rogaghanatä** - *Çotha, Vedanä, Vrana, Dhvajabhagna, Agnimändya, Udarashoola, Gulma, Arsha, Grahaëé, Krimi, Udararoga, Ämaväta, Hädadaurbalya, Käsa, Shwasa, Jérëa shwasanikashotha, Jeeran pooyameha, Kastartava, Rajorodha, Anartava, Pradara, Shwetapradara, Madhumeha, Yakritvikara, Pleeharoga, Ardhvabhedaka, Ashmari, Mootrakrichchhra, Adhmana, Vivandha, Atisara, Madatya, Medoroga.*

**Dose** - Powder - 3 to 5 gm.

**Bark** - Communic acid, Juniperol, beta sitosterol, stigmasterol, diterpine, phenol-totarol, oxalic acid resin, juniperin, juniperin, d-alpha-pinene, terpinen-4-ol, alpha-pinene.

**Seeds and fruits:** Formic acid, acetic acid, malic acid, cyclohexitol, terpene, fermentable sugars, proteins, wax. Gum, pectins, glycolic, ascorbic, d-alpha-pinene, comphene, camphor, juniper.

**Leaf** - Biflavones - cupressuflavone, amentoflavone, hinokiflavone etc.

**Plant** - Labdane diterpenoids and diterpenes as 3alpha-hydroxymanool, etc.

**Wood** - Umbelliferone, ascorbic acid, resin esters, sesquiterpene, polysaccharides-galactan, glucosan, mannan, araban, xylan, thujopsene, etc. **Essential oil:** Neolignan glycosides: junipercomnoside A, junipercomnoside B, icariside E4, benzofuran, propanal, isoscutellarein, etc.

### ***Rāsnā*<sup>116</sup>**

**Botanical name** - *Pluchea lanceolata*

**Family** - Asteraceae / Compositae

**Classical names** - *Rāsnā, Vasurai, Yukta, Surbhi, Sugandha, Elaparni, Yuktarasa Surasaa, Shreeyasi, Plucnin.*

#### **Botanical Description**

An erect, still herb or undershrub up to 1.2 m high, branches terete, slender, softly slightly ashy-pubecent, Leaves very coriaceous, simple alternate, 2.6 \* 0.4 \* 1.0 cm. sessile, oblong or oblanceolate, obtuse, a piculate, narrowed at the base finely ashy pubescent on both sides. Flowers white, yellow, lilae in many headed compound corymbs, pink or with purple tings.

Flowering and Fruiting – March to December

**Habitat and Distribution –**

It usually grows gregariously in dry barren, waste lands in and along cultivated fields forming thickets. Punjab, Rajasthan, Maharashtra, Gujrat, and Bengal, North Africa.

**Parts used** – Root, Leaf, whole plant

**Ayurvedic Properties**

**Rasa** – Téкта

**Guëa** – Guru

**Vérya** – Uñëa

**Vipäka** – Kaöu

**Prabhäva** – Vishaghana

**Doñghanatä** – Väta kaphaçämaka

**Rogaghanatä** –

**Vätavyädhi**, Gådhrasé, Ämadoña, Gulma, Udarashoola, Vibandha, Vararakra, Raktavikara, Käsa, Shwasa, Rajyakshma, Ço<sup>th</sup>a, Çüla, Sidhama, Amavata, Etc.

**Karma** – Kaphavätaçämaka, best in Vätaçämaka medicines, Çothahara, Vedanästhäpana, Ämapäcana,

**Actions and uses**

It is digestive, **Vätahara**, Kaphahar, Çväсахara, Uterine stimulant.

- It is very **useful in Väta Vikära** and **drug of choice of Väta Vyädhi**.
- Its roots are bitter, thermogenic, alexiteric, antipyretic, laxative and used for allaying the pain caused by the sting of scorpions.

- Externally it is **used in rheumatism** and also in diseases of the Nervous system.
- The plant is used for the inflammations and bronchitis, cough, psoriasis, piles. It is also used as laxative, analgesic, antipyretic, nervine tonic.
- The decoction is used to prevent the swelling of joints in arthritis, inflammation, rheumatism, neurological diseases etc.
- **Shothahara, Vatahara, Çéta Prashamanam Vedanasthapanam, Amapachanam Shoolaprashamana, Rehana, Raktashodhaka, Rasayn.**

**Parts used** - Leaves

**Dose:-** Leaf decoction :- 25ml - 50 ml

**Chemical constituents** -

Quercetin, quercitrin, isorhamnetin, pleuchioside, pleuchiol, moretenol, Alijaraimanetine, Protein in high percentage etc.

Pluchin is obtained in Panchang.

**Pharmacological activities** -

**Anti - inflammatory**, anti - oedema, spasmolytic, anti- implantation, **analgesic**. A decoction of the plant has been reported to **prevent the swelling of joints in experimental arthritis** pharmacological investigation indicated that drug had two primary action viz. Acetylcholine like action and Stomach muscle relaxant, spasmolytic action on different muscle. The only central nervous system activity detected in the drug was that of potentiation of barbiturate hyposis. In recent investigation, quercetin and is orhamnetin was identified in the air dried leaves and glycosides were absent.

**Yoga** - *Rasanadi kwatha, Rasanadi taila & Ghritta, Tryodhanga Guggulu, Rasanahdi guggulu, Abhaadi churana.*

## **Çatävaré<sup>117</sup>**

**Botanical name** - *Asparagus racemosus*

**Family** - Liliaceae

**Classical names** - *Çatävaré, Shatapadi, Bahusuta, Atirasa, Bhiru, Indivari, Vari, Mahodari, Narayani, Shataveerya, Pivari, Shatamooli, Urdhwakantika, Rishyaprokta.*

**Vernacular names** - **Eng.** - Wild asparagus; **Hindi** - *Satavar, Satamuli*; **Beng.** - *Shatamuli*; **Guj.**; *Ekalkanto; Satavari*; **Kan.** - *Callagadda*; **Mal.** - *Satavari, Satavali*; **Mar.** - *Asvel, Shatmuli, Satavari*; **Tam.** - *Kilavari, Satavali*; **Tel.** - *Satavari, Callagadda*; **Kash.** - *Sejnana*; **M.P.** - *Narbodh, Satmooli*; **Oriya** - *Chhotaru, Mohajolo, Sotabori*; **Raj.** - *Norkanto, Satawar.*

**Botanical Description (Morphology)**- A tall climbing, much branched spinous undershrub with tuberous, short root stock bearing numerous fusiform tuberous roots, 30 - 100

cm long and 1 - 2 cm thick. Leaves reduced to minute chaffy scales and spines 5-13 cm long, recurved rarely straight, Cladodes acicular 1.2 to 2.3 cm long in tufts of 2 - 6, curved, falcate, finely acuminate, Flowers white, fragrant, in solitary or fascicled, simple or branched racemes 2.5 to 5 cm long, Pedicels 5 cm long jointed in the middle, Berries 7 mm in diameter, glabrous, rugose, 1 - seeded, red.

**Habitat & Distribution** - Throughout India, tropical and subtropical parts including Andamans and ascending in the Himalayas upto an altitude of 1500m.

Flowering occurs in September to December.

In summer season it is destroyed, again become green in rainy season.

**Parts used** - Tuberous root.

**Action and uses** - The roots are bitter, sweet, emollient, cooling, nervine tonic, constipating, galactagogue, ophthalmic, anodyne, aphrodisiac, diuretic, rejuvenating, carminative, appetiser, stomachic, antispasmodic and tonic. They are useful in nervous disorders, dyspepsia, diarrhoea, dysentery, tumours, **inflammations**, burning sensation, hyperdipsia, ophthalmopathy, nephropathy, hepatopathy, strangury, burning micturition, throat infections, tuberculosis, cough, bronchitis, gleet, gonorrhoea, leucorrhoea, leprosy, epilepsy, fatigue, hyperacidity, colic, haemorrhoids, cardiac debility, hypertension, abortion, agalactia and general debility.

Plant used for curing impotency, ulcerated tongue, pain in limbs or bones. Diabetes, Jaundice, and other urinary disorders. Clinical trial of preparation *Shatavari* promising anti diarrhoeal. It is effective in hyperacidity and in skeletal fractures. Bark is antibacterial and antifungal.

Fresh leaves yield four saponins, viz. *Shatavari* I to IV; *Shatavari* IV is a glycoside of sarsasapogenin with two

molecules of rhamnose and in molecule of glucose; *Shatavarin I* has an additional glucose molecule *Shatavarin IV*, antioxytoxic (in Wagner & Wolf, 221 Arch Int. Pharma, 1969, 179, 121)

**Ayurvedic Properties -**

**Rasa** - Madhura, Tékta.

**Guëa** - Guru, Snigdha.

**Vérya** - Çéta.

**Vipäka** - Mahdura.

**Doshghanta** - Vätapittaçämaka.

**Rogaghanata** - Apasmara, Murchha, **Vätavyadhi**, Amlapitta, **Çüla**, Grahaëé, Arsha, Hridayaroga, Paktapitta, **Çoüha**, Stanyakshaya, Shukrakshaya, Mootrakrichchra, Kañäya, Daurabalya, Drishtimandya.

**Karma** - **Vedanästhäpana**, Medhya, Raktapittashamaka, Rasayana, Chakshushya, Nadibaladayaka, Pittashamaka, Çülahara, Balya, Shamaka, Garahi, Gharbhaposhaka, Stanyajanana, Shukrala, Mootrala.

**Doses** - Juice - 10 - 20 ml; Decoction - 50 - 100 ml; Powder - 3 to 6 gm.

**Chemical activities** - Sarsapogenin, saponins A4 - A7, Glycosides 3-glucuronide in leaves, sitosterol and stigmasterol alongwith their glucosides, two spirostanolic and furostanolic saponins and sapogenin, viz. shatavarin I to IV, polycyclic alkaloid, asparagamine A and disaccharide in roots are reported.

**Pharmacological activities** - Nematicidal, anticancer, antidyenteric, antifungal, gastic-sedative, antibacterial, antiabortifacient (shatavarin I), antioxytoxic (shatavarin IV), antiviral, diuretic, galactagogue, antiamoebic, spasmodic, to uterus, hypoglycaemic, phagocytic, hypotensive, anticoagulant, enzymatic.

**Yoga** - *Shatawari Ghritta*

*Narayan taila, Vishnu taila.*

*Shantmulyadi lauha, Shatavaripanak.*

## Yaväne<sup>118a</sup>

**Botanical name** - *Trachyspermum ammi*,

**Family** - Umbelliferae

**Classical names** -

**Hindi** - *Ajaväyana, Ajwayan, Ajmayan, jawain, Jawayan, Yamani, Deepyaka, Bhahmadarbha, Yamanika, Yavanika, Yavasahavya, Ajwain, Jevain, Ajmud.*

**Sanskrit** - *Yaväne, Ajmodica (Small Ajmoda), Agnivardhani, Deepani, Dipya, Yamanika, Yavagraja* etc.

**English** - Bishop's weed, Lovage, Ajown.

**Botanical Description** -

Annual Herb up to 90 cm. tall, erect, glabrous, or minutely pubescent, roots pale yellow or brownish, approximately 1 cm in diameter. Stem slender, striate,. Leaves - rather distant, 2 - 3 pinnate, ultimate segment slender, linear or filiform, 1.0 to 2.5 cm long, Bracts usually many, linear, sometimes divided Bracteoles, 3-5, Small linear. Flowers white small in terminal or lateral

pedunculated, compounds umbels. Fruits - cremocarp, 2 - 3 mm long, ovoid, muricate, subhispid, aromatic, greyish brown, mericarps compressed with distinct ridges and tuberculate, 1 seeded. Flowering and Fruiting - January to November.

**Distribution -**

Cultivated almost throughout India on commercial scale particularly in Uttar Pradesh, Madhya Pradesh, Bihar, West Bengal, Gujrat, Rajasthan, Maharashtra and Andhra Pradesh. A native of Egypt and cultivated in the Mediterranean region, South Mexico, Costa Rica, North East Africa, Europe, South West Asian countries such as Iraq, Iran, Afghanistan, and Pakistan. Flowering of Yavani occurs in Feb. to April. and fruits in June,

**Parts used -** Fruit.

**Actions and uses**

Fruits possess carminative. Stimulant, tonic, and anti-spasmodic properties and are used in diarrhea, cholera, colic, flatulence, indigestion, sore throat, bronchitis, A paste of crushed fruit is applied externally for relieving colic pains hot and dry fomentation of the fruits on the chest in a common remedy for asthma. It is also used in lotions and ointments applied for checking chronic discharge. Oil both pure and dehyolised is antiseptic, aromatic, carminative and anthelmintic used in nasal catarrh and skin diseases, a mouthwash deodorant, toothpaste as an expectorant in emphysema, bronchial pneumonia and other respiratory ailments, externally oil is used in rheumatism.

It's seeds are useful in flatulence, indigestion, colic dyspepsia, diarrhea, cholera, hysteria and spasmodic affections of bowels and check chronic discharges such as profuse expectoration in bronchitis, oil externally applied to relief rheumatic and neurologic pains. <sup>118b</sup>

It is **Vätakapha Çämaka** due to it *Uñëa Vérya*, **analgesic, anti - inflammatory**, antitoxin and diuretic. Its oil is useful in painful inflammatory condition. (Sharma P.V.).

### **Ayurvedic properties**

**Rasa** - *Kaöu, Téкта*

**Guëa** - *Laghu, Rükña, Téknäëa*

**Vérya** - *Uñëa*

**Vipäka** - *Kaöu*

**Doñaghanatä** -

*Kaphavätaçämaka, Pittavardhaka*

**Rogaghanatä** -

*Kaphavätavikära, Çoṭha, Charamroga, Varana, Adhamana, Shitapitta, Aruchi, Agnimandya, Ajeeran, Anaha, Amavata, Sandhiçüla, Udarashoola, Gulama, Pleeha, Krimi, Dantaroga, Galshunthika, Arhsa, Käsa, Shawasa, Visuchika, Mootraghata.*

### **Karma**

*Vedanästhäpana, Çoṭhahara, Anulomana, Jantughana, Vishaghana, Rochana, Deepana, Krimighana, Vatanulomana, Hridyotejaka, Jwaraghana, Çülapraçamana, Shleshmaputihara, Shawashara, Mootrajanana, Shukranashana.*

**Dose** - Powder - 1 to 3 gm,

Oil - 1 to 3 drops

Extract - 30 to 120 mg

Arka - 20 to 40 ml.

### **Chemical constituents**

It contains an aromatic volatile essential oil and a crystalline substance stearoptin, which is collected from the surface of distilled water, also Comene, and terpene, "Thymene". The stearoptin known as 'Ajwan ka phul' which is identical with English thymol contained in thymus Vulgaris, the seeds of Carum coptimum contain an antiseptic thymol and they yield 2% to 3% of an essential oil which is official as Oil of Ajown which contain not less than 40% to 50% thymol<sup>118c</sup>.

Other constituents found in Yavani are Camphene, carvacrol, P- cymene, dipentene, myrcene, alpha and beta pinenes, gama terpinene, thymene, thymol, linoleic oleic, palmitic, petroselinic acids, nicotinic acid, Riboflavin, thiamine, proteins, sugars, tannins etc.

#### **Pharmacological activities -**

Antimicrobial, antibiotic, diuretic, antiseptic, pesticidal, anticholinergic, inhibitory activity against hepatitis C virus (HCV) protease, antifungal.

**Yoga** - *Yavānikādi Kvātha, Yavanikādi Cūrēa, Yavānéñāḍava, Yavānyārka.*

## **Saumph<sup>119</sup>**

**Botanical Name** -- *Foeniculum vulgare*

**Family** - Umbelliferae

**Classical Names:** *Mishreya, Chhatra, Shaleya, Shaleena, Madhurika, Madhura, Misi.*

**Vernacular names** - **Eng.** Fennel, Indian sweet Fennel, Fennel fruit; **Sans.** - *Mishreya* **Assamese** - *Guvamuri*; **Guj.** *Variari Mariaree*, **Hindi** - *Saumph, Sounf, Barisaunf*; **Kannada** - *Badhesoppu, Badisopu*; **Kash.** - *Sanuf Badnai*; **Mal.** - *Perumjirakam Perinchirakam*; **Tamil** - *Shompu, Sokikire, Shombu, Sohikirai Perumcheeragam.*

**Botanical Description** -

A stout, glabrous, aromatic herb, 5' - 6' feet high; stem striate, branched. Leaves alternate, 5-15 cm long, triangular-ovate, much dissected into linear segments, petiole 10-13 cm, broadly sheathing at the base. Flowers bisexual, regular, small, yellow, in large terminal compound umbels; Fruits cremocarp, 0.5-1.0 x 0.15-0.25 cm, ovoid-oblong, prominently ribbed, green, pale green or sea green, beaked.

Flowering and Fruiting: - October - December (- January).

**Distribution**

**Parts Used** - Fruit, oil, root.

**Actions and Uses** -

The fruits are sweet, acrid, bitter, emollient, refrigerant, expectorant, haematinic, ophthalmic, intellect-promoting, anthelmintic, carminative,

**digestive**, stomachic, antiemetic, cardiac stimulant emmenagogue, galactagogue, diuretic, aphrodisiac and tonic. They are useful in hyperdipsia, burning sensation, cough, bronchitis anaemia, ophthalmic disorders, dyspepsia, anorexia, flatulence, colic dysentery, haemorrhoids, vomiting, cardiac diseases, dysuria, fever, skin diseases, splenic disorders, renal disorders, headache, **inflammations**, consumption and general debility. Oil is mildly carminative vermicide and is used in infantile colic, flatulence, checks griping in purgatives and useful against hook worms. Fennel water is digestive and used medicinally as a vehicle for drugs. The leaves are diuretic and the roots are purgative.

**Ayurvedic Properties -**

**Rasa** - *Madhura, Katu, Tikta.*

**Guëa**- *Laghu, Snigdha.*

**Vérya**- *Çéta*

**Vipäka**- *Madhura*

**Doñaghanatä**- *Vatapittashamaka.*

**Rogaghanatä**- *Amatisara, Trishna, Agnimandya, Ajeerna, Adhmana, Kasa, Shwasa, Mootrakrichchhra, Mootraghata, Stanyalpata, Shukravridhi, Twagvikara, Jwara, Daha, Daurbalya, Mashtishkadaurbalya.*

**Karma** - *Deepana, Chhardinigrahana, Pachana, Anulomana, Rechana.*

**Dose -**

Powder - 3-6 gm;

Oil- 5-10 drops;

Root- 3-6 gm

Fruit extract- 20-40 ml.

**PHYSICAL CONSTANTS -**

Foreign matter- Not more than 2%; Total ash- Not more than 12%; Acid insoluble ash- Not more than 15 %; Alcohol-soluble extractive- Not less than 4%; Water

soluble ash- Not less than 1%; Volatile oil- Not less than 1.4%.

**CHEMICAL CONSTITUENTS -**

**Leaves:** -Nelumboside, foenicularin (quercetin-3-arabinoside)

**Fruit :-** Quercetin, xanthotoxin, a-amyrin, P-sitosterol, imperatorin, bergapten, marmesin, columbianetin, osthénol, psoralen, scoparone, seselin, vanillin, stigmasterol, petroselenic acid, cromanone glycoside, phenylethanoid glycoside, threo- epoxyanethole

**Seed and flower oil:-** Anethol, hydrocarbons, triacylglycerols, free fatty acids, free alcohols, sterols, octadecanoic acid, anethol, p-anisic acid, estragole, anethol.

**PHARMACOLOGICAL ACTIVITIES -**

Antispasmodic, antimicrobial, anti-implantation, diuretic, analgesic, antipyretic, antifungal, estrogenic, mosquito repellent, hepatoprotective antioxidant, antihirsutism, **anti-inflammatory**.

**YOGA**

*Shatapushpadi chuma, Mishreyarka, Mishreya chuma, Panchasakar churna, Saraswairishta. Dadhika ghrita, Pane hatikta-guggulu ghrita, Gomootraharitaki, Mahanarayana laila, Baladhatryadi taila, Abhayarishta, Erandapaka.*

## Ajmoda<sup>120</sup>

**Botanical name** - *Carum roxburghianum*.

**Family** - Umbelliferae

**Classical names** - *Ajmoda, Khrashva, Mayurah, Deepyak, Brahmkushaa, Lochamastika.*

**Vernacular names** - **Sans.-** *Dipyaka*; **Siddha:** *Ashamtagam*; **Bengali:** *Randhuni, Banyamani*; **Gujrati:** *Bodi Ajamo, Ajamo, Ajmuda, Ajmod*; **Kannada:** *Oma, Ajavana, Omakki*; **Kashmiri:** *Fakhazur, Banjuan*; **Malayalam:** *Ayamodakum, Omam*; **Marathi:** *Ajmoda, Oova*; **Punjabi:** *Valjawain, Ajmod*; **Telugu:** *Naranji vamu.*

**Botanical Description:-** Annual shrubs, 1 to 3 feet high,

### **Distribution**

Ajmoda consists of dried, aromatic fruits. It is an annual herb cultivated in Andhra Pradesh, Gujarat, Madhya Pradesh and Karnataka; collected by thrashing plants on a mat and dried in shade or in drying sheds.

**Parts used** - Fruit

### **Actions and uses:-**

Used as external application in painful conditions. Internally it is used in *Agnimandya, Arochaka, Çūla*, abdominal pain, *Krimi, Kasa, Shwasa, Bastishoola, Garbhashya vedana, Mutraghaata, Krichchhartava*. It is *deepen, Pachaka, Vidahi, Kaphahara, Pitta vardhaka, Ruchivardhak, Krimighan, Shulaghana, Amanashaka, Anuloman.*

**Ayurvedic properties** -

**Rasa** - *Katu, Tikta.*

**Guna** - *Tékñäëä, Ruksha, Laghu.*

**Veerya** - *Ushna*

**Vipaka** - *Kaõu*

**Doshaghanta** - *Vaatkaphaghna.*

**Rogaghanata** - Painful disorders, vomiting, *Agnimändya, Ädhmäna, Udaraçüla*, worm infestations.

**Karma** - *Deepana, Shoolahar, Anuloman, Krimighana, Artavajanan, Antiarthritic, Anti-inflammatory, Nervine tonic.*

**Dose** - Powder :- 1-3 grams. Twice or thrice a day.

**Physical constants**

**Chemical constituents** - It contains volatile essential oil, mucilage and salt. The essential oil contains Meethers of thymol, carvacrol and thymoquinol, used as a carminative. The oil shows strong antifungal activity against *Candida albicans*, and moderate activity against Gram-positive and Gram negative bacteria. Seeds contain yellowish volatile oil - 1.5 to 3%; sulphar, Apoel a toxic substance, Glucoside.

**Pharmacological activities -**

**Formulations:** *Ajamod Arka, Ajamodadi Churna, Caturabeeja Churana.*