साक्ष्याधारित आयुर्वेद

Evidence-based Ayurveda

ACHARYA BALKRISHNA

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PRF

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Divine Blessings

Swami Ramdev

It is with immense joy and reverence that I introduce this remarkable book dedicated to the journey of evidence-based Ayurvedic medicines. Ayurveda, our timeless Indian system of medicine, has been a guiding light for generations, offering insights into the intricate interplay of our mind, body, and spirit. As a practitioner of Yoga and Ayurveda, I have long witnessed the profound impact of these two traditional sciences on the path to holistic well-being. Now, this transformative book takes us further, merging the ancient wisdom of Ayurveda with modern scientific research, illuminating a path toward greater understanding and validation.

This book provides evidence for the research work done by scientists and traditional medicinal practitioners at the Patanjali Research Foundation, Haridwar coming together to unlock the secrets within Ayurvedic remedies. Through the lens of evidence-based exploration, they have endeavored to validate the efficacy and safety of these ancient medicines, enhancing stronger belief in Ayurveda's timeless wisdom.

This book offers a treasure trove of knowledge, backed by rigorous research, showcasing the effectiveness and safety of traditional Ayurvedic remedies. I have confidence that this book will inspire practitioners, researchers, and healthcare professionals who practice the integrative approach towards patient care. By combining the wisdom of Ayurveda and the insights of modern science, we provide access to a world of healing possibilities, empowering individuals to lead healthier, more balanced lives.

I extend my deepest gratitude to all those who contributed to this groundbreaking work. Let us celebrate this momentous journey of unifying ancient wisdom with modern science, embracing the transformation that evidence-based Ayurvedic medicines and Yoga bring to our lives. Together, we move forward on a transformative voyage for a healthier and harmonious world, where Ayurveda and Yoga stand united as beacons of well-being and enlightenment.

Pearl of Wisdom

Acharya Balkrishna

It is with great pleasure and excitement that I introduce this pioneering book dedicated to the concept of evidence-based Ayurvedic medicines. As we delve into the pages that follow, we embark on a transformative journey that merges the timeless wisdom of Ayurveda with the rigor of modern scientific research. This fusion represents a significant step for unlocking the true potential of traditional Ayurvedic remedies, solidifying their place in the contemporary healthcare landscape.

This book serves as a testament to the perseverance of countless researchers, practitioners, and visionaries who work rigorously at the Patanjali Research Foundation, Haridwar in recognizing the need to bridge the gap between tradition and modernity. By subjecting traditional Ayurvedic remedies to the highest standards of scientific scrutiny, researchers have validated its efficacy and safety, granting Ayurveda a renewed sense of credibility and acceptability.
While the journey has been challenging, it has yielded remarkable results. The evidence-based approach has unearthed new insights, revealing the potential of Ayurveda to complement modern medicine in addressing a wide range of health issues. This approach ensures that the treasures of Ayurveda are not lost to antiquity but rather harnessed for the betterment of human health.

This book is a culmination of the collective efforts of researchers and practitioners who have tirelessly worked to elevate Ayurveda to a higher echelon of scientific credibility. The book chapters describing the classical and evidence-based Ayurvedic treatments have been arranged as per the human anatomy starting from head to toe. I am confident that this comprehensive exploration of evidence-based Ayurvedic medicines will inspire practitioners, researchers, and healthcare professionals to embrace a more integrative and holistic approach to patient care.

In conclusion, I extend my heartfelt gratitude to all those who have contributed to this groundbreaking work done at Patanjali Research Foundation, Haridwar. Together, we embark on a transformative journey toward a healthier, more balanced world, where evidence-based Ayurvedic medicines play a pivotal role in shaping the future of healthcare.

LIST OF AYURVEDIC MEDICINES

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Abbreviations

S.N.	Abbreviation	Full Form
1.	A.Pt.	Aerial part
2.	A.Rt.	Aerial root
3.	Bk.	Bark
4.	Bb.	Bulb
5.	Exd.	Exudate
6.	Fl.	Flowers
7.	Fr.	Fruit
8.	Fr.Pp.	Fruit pulp
9.	Fr.Rd	Fruit rind
10.	Gal.	Gall
11.	Ifl.	Inflorescence
12.	Lf.	Leaf
13.	Lf.Pp.	Leaf pulp
14.	Un.Rp.Fr.	Fruit (Unripe)
15.	Rz.	Rhizome
16.	Rt.	Root
17.	Rt.Bb.	Root bulb
18.	Rt./St.Wd.	Root/Stem wood
19.	Sd.	Seed
20.	Stmn.	Stamen
21.	St.	Stem
22.	St.Bk.	Stem bark
23.	St.Wd.	Stem wood
24.	Th.	Thalamus
25.	Tb.Rt.	Tuberous root
26.	Wl.Fr.	Whole fruit
27.	Wl.Pt.	Whole plant
28.	Wd.	Wood

Capsule

NEUROGRIT GOLD
न्यूरोग्रिट गोल्ड

Introduction to Neuroprotection and Neuromuscular Disorders:

Neuroprotective or neuroprotection is defined as the mechanisms and strategies employed to defend the central nervous system against injury due to both acute and chronic neurodegenerative disorders. Neuroprotection aims to protect the nervous system from any damage or injury in people who sustain a health condition that has neurological effects and also aim to limit the nerve death after Central Nervous System (CNS) injury, protect the CNS from premature degeneration. The neuroprotective agents counter the effects of neurodegeneration and nerve breakdown. Despite differences in symptoms or injuries associated with CNS disorders, many of the mechanisms behind neurodegeneration are the same. Common mechanisms of neuronal injury include decreased delivery of oxygen and glucose to the brain, energy failure, increased levels in oxidative stress, mitochondrial dysfunction, excitotoxicity, inflammatory changes, iron accumulation, and protein aggregation of these mechanisms, neuroprotective treatments often target oxidative stress and excitotoxicity—both of which are highly associated with CNS disorders. Not only can oxidative stress and excitotoxicity trigger neuron cell death but when combined they have synergistic effects that cause even more degradation than on their own. Limiting excitotoxicity and oxidative stress is a very important aspect of neuroprotection. Common neuroprotective treatments are glutamate antagonists and antioxidants, which aim to limit excitotoxicity and oxidative stress respectively.

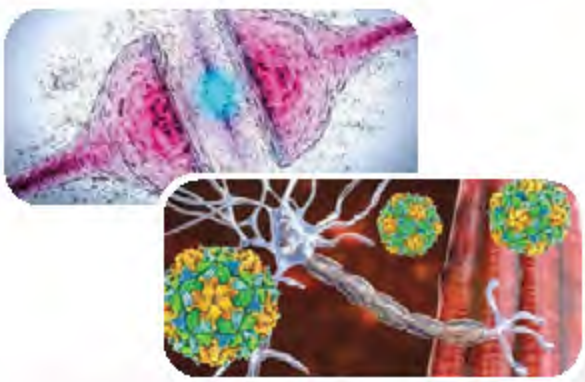
The term "neuromuscular diseases" refers to a category that include damage to or dysfunction of the muscles or peripheral nerves. The site of injury can be in the cell bodies (i.e., Amyotrophic Lateral Sclerosis [ALS] or sensory ganglionopathies), axons (i.e., axonal peripheral neuropathies or brachial plexopathies), Schwann cells (i.e., chronic inflammatory demyelinating polyradiculoneuropathy), neuromuscular junction (i.e., myasthenia gravis or Lambert-Eaton myasthenic syndrome), muscle (i.e., inflammatory myopathy or muscular dystrophy), or any combination of these sites. Some neuromuscular diseases, such as amyotrophic lateral sclerosis, are also linked to disorders of the central nervous system, although the majority only affect the peripheral nervous system. Neuromuscular disease can be caused by autoimmune disorders, genetic/hereditary disorders and some forms of the collagen disorder Ehlers–Danlos syndrome, exposure to environmental chemicals and poisoning which includes heavy metal poisoning. The diagnosis and treatment vary according to the type and cause.

Ingredients and Medicinal Uses of Neurogrit Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Fine Powder of:				
Ekangveer Ras	Classical Preparation	Vatik Vikar Har, Pakshanghat Har	• Alleviate diseases of vitiated vata dosha • Helpful in treatment of paralysis	85 mg
Moti Pishti	Classical Preparation	Anidra Har, Kshaynashak	• Alleviate insomnia and tuberculosis (T.B.)	34 mg
Rajat Bhasma	Classical Preparation	Snayu Daurbalya Har	• Helpful in weakness	34 mg
Vasant Kusumakar Ras	Classical Preparation	Manas Vikar-Har, Rasayan	• Alleviate mind related problems • Rejuvenative	17 mg
Rasraj Ras	Classical Preparation	Vatik Vikar Har, Pakshaghat Har	• Alleviate diseases of vitiated vata dosha • Helpful in alleviating paralysis	17 mg
Jyotishmati (Sd.)	*Celastrus paniculatus*	Medhya, Buddhi Vardhak	• Brain tonic • Memory booster	152 mg
Dry Extract of:				
Giloy Extract (St.)	*Tinospora cordifolia*	Rasayan, Tridosh Har, Vishaghna	• Rejuvenative • Alleviates all three doshas • Anti-poisonous	161 mg

Neurogrit Gold is Useful in:

- **Neuroprotective**
- **Neuromuscular Disorders**



Neurogrit Gold: Description in Classical Texts:

Neurogrit Gold an Ayurvedic properietary medicine developed to prevent and manage nervous system disorders. The formulation of neurogrit gold has been done by combining the various effective Ayurvedic herbal and mineral drugs in appropriate manner.

Ekangveer Rasa used in this formulation is helpful in hemiplegia, facial palsy, dhanurvata, vataroga, sciatica pain visvachi. It can be given with ardraka svarasa.

Moti Pisti is helpful in pittaj vikar. It reduces burning sensation and can be given with honey, butter milk.

Rajat bhasma has astringent and sour tastes as per Rasa Ratna Samucchaya. It has cold and unctuous qualities and pacifies vata and kapha doshas and scrapes off accumulated doshas from the body and also promotes intelligence.

Vasant Kusumakara Rasa is helpful in diabetes, ageing and associated degeneration, memory problems. It can be given with honey, cow ghee, milk, sugar.

Rasaraj Rasa has important therapeutic uses in paraplegia, facial paralysis, seizures and convulsions, locked jaw, deafness, brain disorderrs, and diseases due to vata dosha like fatigue. It can be given with pippali churna and honey, maricha churna and ghrit.

Giloy has pungent, bitter and astringent in taste. Physical property is lightness. The vipaka is madhur and this drug is hot in potency. It pacifies vata, pitta, kapha doshas and useful in indigestion, thirst, polyuria, anemia, skin diseases, and heart ailments.

Jyotishmati has pungent and bitter tastes. It helps in sharpness of mind. This drug is hot in potency. It pacifies vata, kapha doshas. It acts as laxatives, emetic, appetizer and memory booster.

Scientific Evidence of Neurogrit Gold:

The herbo-mineral formulation, Neurogrit gold was analyzed against neurodegenerative disorder at Patanjali Research Foundation. Parkinson disease (PD) is the second most frequent age-related neurodegenerative disease, associated with several motor and non-motor symptoms. The motor symptoms of patients with Parkinson disease include tremors, rigidity, bradykinesia, altered gait, and speech difficulty, whereas the non-motor symptoms include constipation, autonomic dysfunction, sleep dysfunction, sensory symptoms, mood disorders, and cognitive abnormalities. Traditional herbal medicines hold potential for treatment of Parkinson disease. The neuroprotective effects of Neurogrit gold were investigated against Parkinson disease. The mode of action of Neurogrit gold was evaluated using the *Caenorhabditis elegans* (*C. elegans*) N2 (wild type), NL5901 (α-synuclein protein aggregated) and BZ555 (dopaminergic neurons degenerated) strains, which were used to model major hallmarks of Parkinson disease. The phytochemicals in Neurogrit gold normalized movement, food sensing, cellular (mitochondrial structure-function, ROS levels)

and also molecular (gene expression) events, which contributed towards the improvement in Parkinson disease -specific neurodegeneration, oxidative stress, and mitochondrial dysfunction. The findings revealed that the herbo-mineral formulation Neurogrit gold can be a potential agent for the treatment of Parkinson disease via its differential neuroprotective and protein aggregation mitigating effects on *C. elegans.*

The phytochemical analysis of Neurogrit was performed on High Performance Liquid Chromatography (HPLC). Photo Diode Array Detector (PDA) was used to compare the profile of Neurogrit Gold with that of reference standard at 270 nm wavelength. Studies conclude that Neurogrit, apart from containing minerals, various phytochemicals like gallic acid, 5-(hydroxymethyl) furfural, protocatechuic acid, cinnamic acid, and piperine as shown in fig. 1.

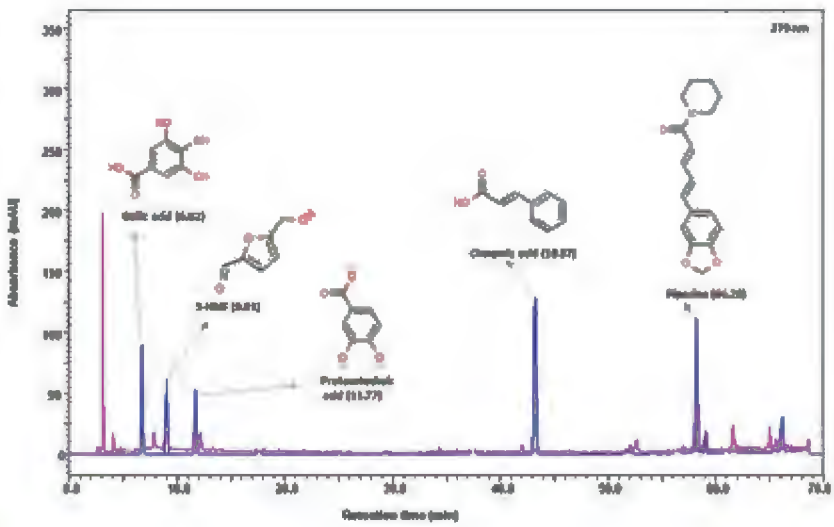


Fig. 1. High Performance Liquid Chromatography (HPLC) with Photo Diode Array Detector (PDA) study confirm that Neurogrit contain gallic acid at 6.82 minute, 5-(hydroxymethyl) furfural (5-HMF) at 9.01 minute, protocatechuic acid at 11.77 minute, cinnamic acid at 58.37 minute, and piperine at 66.20 minute.

Dose and Method of Use of Neurogrit Gold:

Dose and Frequency	2 Capsules, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

MEMORYGRIT
मेमोरीग्रिट

Introduction to Dementia:

Dementia is defined as cognitive decline severe enough to interfere with independent daily living. Dementia is best characterized as a syndrome rather than a single disease. The causes of dementia are diverse and include primary neurological disorders, neuropsychiatric disorders, and medical disorders. Multiple illnesses often contribute to a patient's dementia syndrome. Neurodegenerative dementias such as Alzheimer's disease and Dementia with Lewy bodies are most common in the elderly, while traumatic brain injury and brain tumors are common causes in young adults. Dementia is recently updated in the The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria to be called as Major Neurocognitive Disorder.

Using nationally representative data collected in India between 2017 and 2020, a study found that an estimated 7.4% i.e. 8.8 million of people aged 60 and over had dementia. The prevalence of dementia was higher in women (9.0%) than in men (5.8%) and higher in rural (8.4%) than in urban areas (5.3%).

The world is looking at developing a standard and structured approach to the treatment of dementia.

Ingredients and Medicinal Uses of Memorygrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of :				
Brahmi (Wl.Pt.)	*Bacopa monnieri*	Medhya- Rasayan, Manoglanihara	• Promotes intellect • stress relieving	50 mg
Shankhpushpi (Wl.Pt.)	*Convolvulus pluricaulis*	Smriti Vardhak, Manas Dosha Har	• Increases memory • Alleviates doshas of mind	50 mg
Mithi Vach (Rz.)	*Acorus calamus*	Medhya, Pachak	• Promotes intellect • increases digestive capacity	50 mg
Ustekhaddus((Lf.)	*Lavandula stoechas*	Medhya, Vatnadi Balya	• Promotes intellect • Gives strength to nervous system	50 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Gajva (Wl.Pt.)	*Onostoma bracteatum*	Hridya, Rasayan	• Cardio tonic Rejuvenating	50 mg
Malkangani (Sd.)	*Celastrus paniculatus*	Medhya, Buddhi Vardhak	• Promotes intellect • enhances knowledge/ wisdom	50 mg
Aswagandha (Rt.)	*Withania somnifera*	Medhya, Manoglanihara	• Promotes intellect • Stress relieving	50 mg
Saunf (Ft.)	*Foeniculum vulgare*	Vatanulomak, Dah Prashaman	• Removes accumulated vata dosha • Allevieates thirst	50 mg
Jatamansi (Rz.)	*Nardostachys jatamansi*	Medhya Janak, Mansik Rog Har	• Creates better intellectual power • Cures diseases of the mind	30 mg
Fine Powder of:				
Rajat Bhasma	Classical Preparation	Buddhi Poshak, Smriti Vardhak	• Nourishes knowledge/wisdom • Increases memory	70 mg

Memorygrit is Useful in:

- **Dementia**
- **Alzheimer**
- **Brain Disorders**
- **Improving Memory**
- **Stress**
- **Depression**
- **Anxiety**

Memorygrit: Description in Classical Texts:

Memorygrit is an Ayurvedic proprietary medicine that has been developed to manage problem related to memory or brain. This formulation contains dry extracts of Ayurvedic herbs as well as the bhasma preparation that is unique to Ayurvedic science. This herbo-mineral formulation has been prepared into compressed tablet form- a dosage form that fits into needs and preferences of the current era.

The ingredients used in this formulation has mentioned in classical texts like Bhava Prakasha included brahmi under Guduchyadi varga. It has the qualities of coolness, mobility and lightness. This herb is astringent and sweet in taste and has madhura vipaka. It promotes life, boost memory and is rejuvenating. Kaiyyadeva nighantu adds that brahmi is cardio tonic and promotes both intellect and memory. Brahmi is considered the best drug for memory loss by Ashtanga Hridaya.

Sankhpushpi comes under guduchyadi varga in Bhava prakasha. It has astringent taste and is hot in potency. It is aphrodisiac, rejuvenating, boost memory, promote complexion, strength, intellect, and remedial to all mental disorders. It can help in the management of diseases like epilepsy also. Bhava prakasha placed vacha under Hareetakyadi varga. It has a penetrating smell. It has pungent and bitter tastes and is hot in potency. This herb can help in managing epilepsy and insanity. Ustekhaddus is traditionally used for various treatments, but classical references are few. Acharya P.V. Sharma mentions its properties and actions, which includes dry and sharp qualities, pungent and bitter tastes, and katu vipaka. It is hot in potency. By its prabhava, it is medhya that is promoting intellect. This drug pacifies vatadosha.

Known as Gojihwa in Ayurveda, gajva is light and unctuous in quality. It has sweet and bitter tastes and madhura vipaka. Being cold in potency and pacifying vatapitta dosha, it also helps to remove vitiated kapha dosha from the body. This herb acts as a brain tonic and promotes strength in general. Malkangani/ Jyotishmati is placed under Hareetakyadi varga in Bhava prakasha. The drug is pungent and bitter in taste, alleviates kaphavata doshas and is extremely hot in potency. It promotes intelligence and memory. Aswagandha, placed under Guduchyadi varga in Bhava prakasha, is vatakaphahara in action, having bitter and astringent tastes. It is hot in potency and promotes strength and is rejuvenating as well.

Saunf known as Mishreya in Ayurveda is light and unctuous in quality, having sweet, pungent and bitter tastes with madhura vipaka and cold potency. It pacifies vata and pitta doshas and promotes intellect and strength. Jatamansi has bitter, astringent and sweet tastes, cold potency and is light and unctuous in quality. It has katu vipaka and by prabhava, it alleviates manasik doshas. Rajat bhasma has astringent and sour tastes as per Rasa Ratna Samucchaya. It has cold and unctuous qualities and pacifies vata and kapha doshas. It scrapes of accumulated doshas from the body and also promotes intelligence.

Scientific Evidence of Memorygrit:

Recently, there is a shift in research goals in treatment of depression to focus on early detection, etiopathology and individualized treatment approach. Natural products are widely being looked at for possible anti-depressive drug. Patanjali Research Foundation has studied the efficacy of Memorygrit in depressive illness. The components of Memorygrit were evaluated for their anti-depressant activity in rat model of Chronic Unpredictable Mild Stress (CUMS). The rats were subjected to mild stressful conditions, like a restricted supply of food and water for a few hours, placing the rats in restrainers for a short period of time, exposure to continuous illumination for the whole day and being subjected to higher than permissible sound levels for a few hours to induce mild stress. These mild stressors when employed in an unpredictable manner for eight-consecutive weeks led to the development of depression-like symptoms in animals. This was adjudged by standard tests of anhedonia like sucrose preference test, forced swim test and novelty suppressed feeding test. Depressive symptoms were assessed by reduced sucrose consumption in sucrose preference test, diminished mobility of animals in the forced swim test and the decreased time spent for exploration in search of food in a novel area. The components of Memorygrit when administered by oral route, dose-dependently and significantly ameliorated these depressive symptoms. Accordingly, Memorygrit has the clinico-therapeutic potential to be used in the management of major depressive illness.

Reverse Phase High Performance Liquid Chromatography (RP-HPLC) method was developed to confirm the presence of phytochemicals present in Memorygrit. RP-HPLC fingerprint at 270 nm wavelength confirm the presence of chlorogrnic acid at 20.41 minutes, rutin at 25.90 minutes, scopoletine at 27.19 minutes, quescetin at 40.35 minutes, β asarone at 57.74 minutes, and at 230 nm wavelength benzoic acid at 31.17 minutes. These compounds were further confirmed by comparing them with reference standard. Overlay chromatogram of Memorygrit and reference standard are shown in fig. 1.

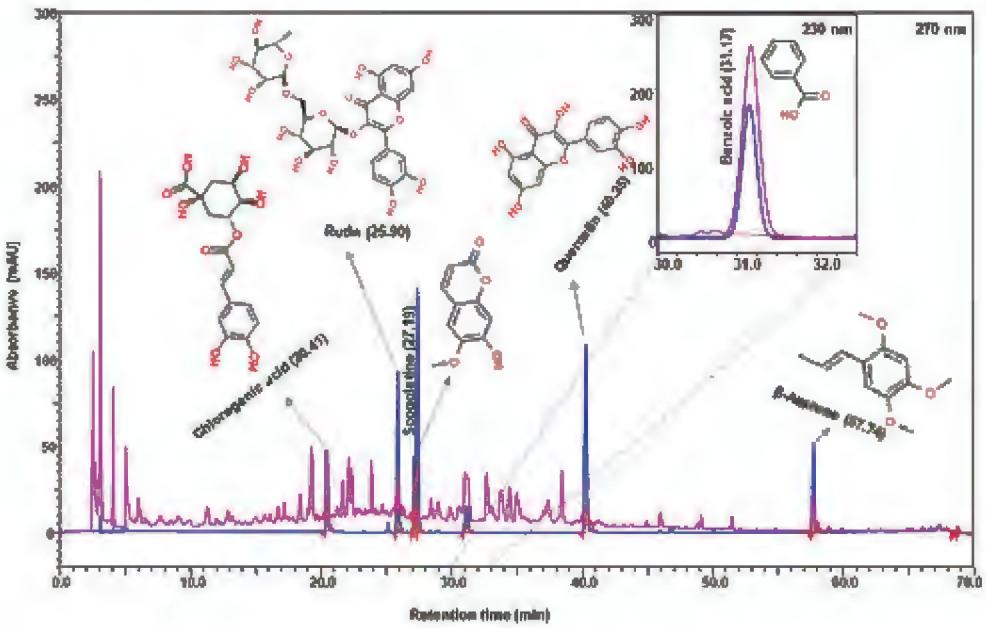


Fig.1: Reverse Phase High Performance Liquid Chromatography (RP-HPLC) analysis at 270 nm wavelength and 230 nm wavelength confirm the presence of chlorogrnic acid at 20.41 minutes, rutin at 25.90 minutes, scopoletine at 27.19 minutes, benzoic acid at 31.17 minutes, quescetin at 40.35 minutes and β asarone at 57.74 minutes.

Dose and Method of Use of Memorygrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

EARGRIT ईयरग्रिट
EARDROP ईयरड्रॉप

Introduction to Ear Problems, Ear Infections, Ear Pains and Excessive Ear Wax:

Ear, the organ of hearing and equilibrium that detects and analyse sounds and maintain the sense of balance. Ear is divided into three main parts: outer, middle and inner one. The sound waves generally coming through outer ear reaches the middle ear where the waves makes eardrum to vibrate and these vibrations are transmitted through the three tiny bones commonly known as ossicles, to middle ear. Then the vibrations travel to inner ear which makes nerve impulses that reaches to brain and brain recognizes the sound. The inner ear performs a special function of balancing and maintaining the equilibrium. But there are variety of conditions that affects the hearing and balance such as Ear infections, Ear pain, Glue Ear, Ear Wax, Swimmer's Ear.

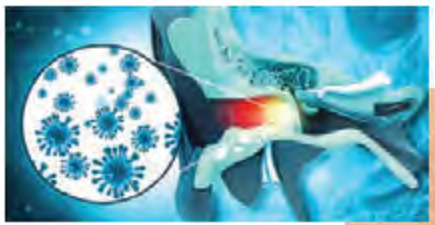
Ear Infection: Ear infection is the infection generally caused by bacteria, fungi or viruses in the ear canal, or the Eustachian tube that connects the ear to the throat. The ear infection can be diagnosed by physical examination. The symptoms of an ear infection depend on the type of infection and there are several types of infections including otitis externa, otitis media, infectious myringitis. Acute mastoiditis, vestibular neuronitis, herpes zoster of the ear. The treatment also depends upon the type of infection but the general treatment includes antibiotics, antiviral and pain-relieving medications and sometime surgery. Otalgia commonly known as Ear-ache or Ear Pains. Otalgia is ear pain and it divided into two categories of primary otalgia and secondary otalgia. Primary otalgia is pain coming directly from the ear whereas secondary otalgia is referred pain from somewhere outside the ear. Ear Wax is produced by glands in the ear canal. The blockage or impaction occurs when the wax gets pushed deep within the ear canal. It is the one of the most common ear problem. The common cause of impaction is use of cotton swabs, hearing aids. Symptoms of ear wax includes ear pain, cough, ringing sound, dizziness, fullness sensation. The general treatment to remove ear wax by irrigate ear with warmed water, sodium bicarbonate, by a curette and also by using gentle suction to remove the wax.

Ingredients and Medicinal Uses of Eargrit Eardrop:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 ml contains
Liquid Extract of :				
Methi (Sd.)	*Trigonella foenum-graecum*	Shoth har, Twachya	• Anti-inflammatory • Good for skin	250 mg
Neem (Bk.)	*Azaridachta indica*	Vrana-shodhak-ropak	• Wound cleansing and wound healing	500 mg
Dhatura (Lf.)	*Datura stramonium*	Sthanik shoth vedana Har	• Provide relief from local inflammation and pain	250 mg
Tulsi (Lf.)	*Ocimum sanctum*	Vran Shodhak	• Wound cleansing	250 mg
Bhringraj (Wl.Pt.)	*Eclipta alba*	Twak dosh Har, Vranaghna	• Pacify disorders of skin • Wound healing	250 mg
Apamarg (Wl.Pt.)	*Achyranthes aspera*	Karna nad-Karna shoola Har	• Alleviates tinnitus and earache	250 mg
Haldi (Rz.)	*Curcuma longa*	Sthanik shoth vedana har, Vishaghna	• Provide relief from local inflammation and pain • Anti-toxic	250 mg
Sudarshan (Lf.)	*Crinum latifolium*	Karna shool Har, Sthanik Shoth Har	• Alleviates earache • Provide relief from local inflammation	500 mg

Eargrit Eardrop is Useful in:

- **Ear Problems**
- **Ear Infections**
- **Ear Pains**
- **Excessive Ear Wax**



Eargrit Eardrop: Description in Classical Texts:

Eargrit Eardrop is an Ayurvedic Proprietary Medicine used for management of various ear problems. Different Ayurvedic herbs that are traditionally used for Karnarogas are added in this preparation.

Methi is pungent and bitter in taste with qualities of lightness and dryness; hot potency

and katu vipaka. It pacifies kapha vata doshas. Neem has cold potency, katu vipak and laghu property. It pacifies vata, pitta, kapha doshas. Useful in fatigue, anorexia.

Dhatura has sweet, pungent, astringent and bitter tastes with qualities of sharpness, dryness and heaviness; hot potency and katu vipaka. It pacifies kapha and vata doshas.

Tulsi is pungent and bitter in taste with a hot potency, and has dryness as the main property. It pacifies vata and kapha doshas and aggravates pitta dosha. This herb is useful in skin diseases, dysuria, burning sensation, and diseases caused by vitiation of blood. It acts as a cardiac toner and appetizer.

Bhringraj has pungent and bitter tastes with qualities of dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas.

Bhavaprakasha has included apamarg under Guduchyadi varga. The drug has pungent and bitter tastes with the quality of sharpness and hot potency with katu vipaka. It helps reduce pain and can pacify kapha.

As bhavprakash nighantu said, Haldi has pungent and bitter taste and hot potency. It has dry property. It pacifies pitta dosha. Useful in skin diseases, polyuria, edema, anemia, ulcer, and disease caused by vitiation of blood.

Sudarshan has sweet and bitter tastes with qualities of dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas. It is useful in earache and is anti-inflammatory.

Scientific Evidence of Eargrit Eardrop:

Eargrit eardrop is a unique Ayurvedic developed by extraction of herbs in a specific ratio mentioned in the ingredients list. For the investigation of phytochemicals present in the eardrop, High Performance Thin Layer Chromatography (HPTLC) was conducted as shown in Fig. 1. Study conducted at 366 nm of wavelength confirm the presence of seven characteristic bands with blue fluorescent, and one each with red and yellow fluorescent.

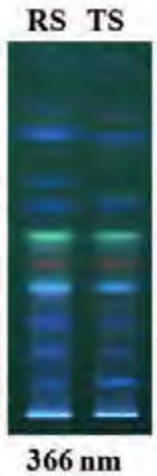


Figure 1. High Perfromance Thin Layer Chromatography (HPTLC) Fingerprint of Eargrit Eardrop at 366 nm RS represents Reference Sample and TS represents Test Sample. Seven blue, one yellow and red fluorescence spots were observed in reference and test sample.

Further reverse phase High Performance Liquid Chromatography (HPLC) equipped with Photo Diode Array Detector (PDA) was conducted, confirms the presence of many phytometaboloites at 254 nm wavelength as shown in the form of the peaks. At 210 nm and 420 nm wavelengths, ursolic acid and curcumin are identified in comparison with reference standards as shown in Fig. 2

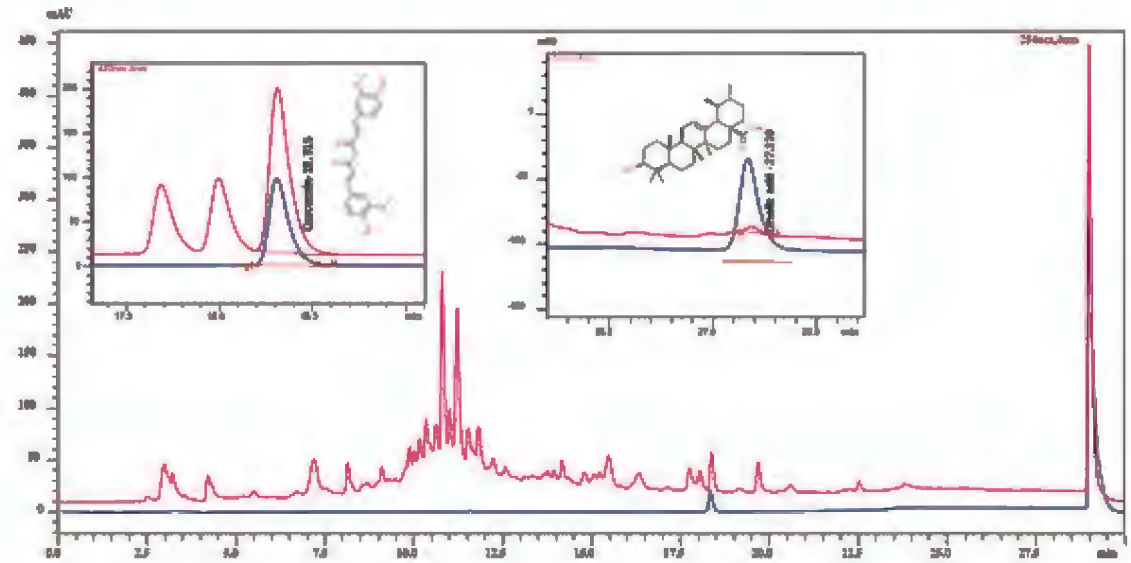


Fig. 2: High Performance Liquid Chromatography (HPLC) confirms the presence of many phytometaboloites at 254 nm wavelength. At 210 nm and 420 nm wavelengths, ursolic acid and curcumin are identified in comparison with reference standards at 18.315 and 27.339 minutes respectively.

Dose and Method of Use of Eargrit Eardrop:

Dose and Frequency	2-5 Drops in an ear
Or as directed by the physician.	

Tablet

ईयरग्रिट गोल्ड
EARGRIT GOLD

Introduction to Inflammation of Internal Ear (Labyrinthitis), Hearing Problems, Acute Ear Problems and Ear Ache:

Labyrinthitis is generally known as inflammation of an inner ear/ an inner ear infection. It is caused when the labyrinth which is the innermost part of the ear get inflamed, affecting the hearing and balance problems. Normally it gets inflamed by a viral infection, such as a cold or flu and sometimes by a bacterial infection. Most of the cases occur in adults aged between 30 to 60 years old. The most common symptoms include dizziness, hearing loss (mild to total loss of hearing), fluid or pus leaking, ear pain, mild headaches, ringing or humming in the ear. The general treatment involves a combination of bed rest and warm compress over the ear and sometimes antiviral medications.

Hearing Problems can vary from mild discomfort to complete loss of hearing. Hearing Loss is a common problem caused by loud noise, aging and genetic variations. The prevalence of hearing loss doubles with every ten-year increase in age, making it the fourth most common cause of disability in the world. It can be caused by damage to any portion of the peripheral and central nervous system. The main cause of hearing loss are degenerative processes that is associated with aging, genetic mutations, noise exposure, exposure to therapeutic drugs which have ototoxic side effects and any other chronic condition that lead to damage the auditory nerves.

Acute ear problems generally include both acute otitis externa and acute otitis media. Acute otitis externa is infection that occur in external ear whereas acute otitis media is the infection which occur in middle ear. External Ear Infection is an infection of the cutis and sub-cutis of the external auditory canal involving the tympanic membrane and the pinna. It is also known as Otitis Externa. Its different forms include acute diffuse otitis externa, circumscribed otitis externa, chronic otitis externa, and malignant otitis externa. Otitis Externa is common all over the world having a prevalence rate of up to 10% worldwide. Otitis Externa generally occurs due to bacteria, most commonly *Pseudomonas aeruginosa* and *Staphylococcus aureus*. The symptoms of otitis externa are severe pain in the ear due to irritation of the periosteum which becomes worsened by pressure on the tension on the pinna. Its examination is called otomicroscopic examination which examines the ear canal and tympanic membrane and pinna, the surrounding lymph nodes. The treatment of otitis externa consists of cleansing the ear canal, topical antiseptic, and anti-microbial treatment. Otitis media is a major source of health-care visits worldwide, and its consequences are important causes of

avoidable hearing loss, particularly in the developing countries. They are a category of inflammatory and complicated infective diseases that affect the middle ear. They have various different subtypes and primarily affect youngsters aged 3 to 7 years. Otitis Media (OM) is a middle ear inflammation that commonly occur as a consequence of an upper respiratory tract infection. Otitis media with effusion is a condition in which the inflammation is accompanied with fluid. Pseudomonas aeruginosa and Staphylococcus aureus are the primary bacteria to blame. *Pseudomonas aeruginosa* infections, in particular, have proven difficult to eliminate because the bacteria form a 'biofilm' that protects this from both drugs and immune cells. Antibiotics are no longer beneficial against almost all strains.

Ear-ache is also medically termed as Otalgia. Otalgia is ear pain and it divided into two categories of primary otalgia and secondary otalgia. Primary otalgia is pain coming directly from the ear whereas secondary otalgia is referred pain from somewhere outside the ear. Treatment depends on the cause.

Ingredients and Medicinal Uses of Eargrit Gold:

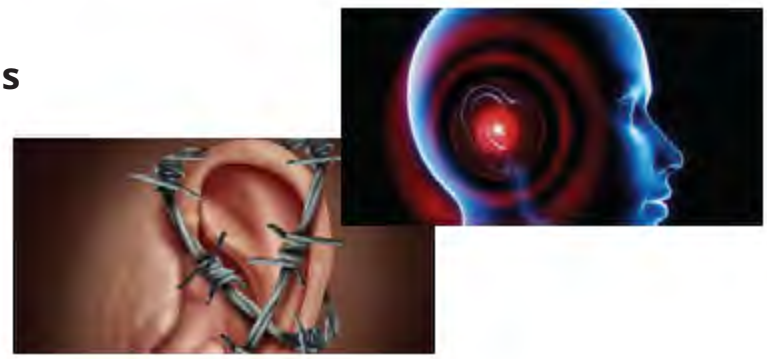
Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Shwet Sariva (Rt.)	*Hemidesmus indicus*	Aamhar, Vishghna	• Cures indigestion • Anti-poisonous	10 mg
Mulethi (Rt.)	*Glycoyrrhiza glabra*	Shothghna, Vishghna	• Reduces swelling • Anti-poisonous	10 mg
Kutha (Rt.)	*Saussurea lappa*	Vedna Har	• Reduces pain	10 mg
Dalchini (Bk.)	*Cinnamomum zeylanicaum*	Vedna Har	• Reduces pain	10 mg
Chhoti Elaichi (Fr.)	*Elettaria cardamomum*	Shulaghna	• Reduces pain	10 mg
Tejpatra (Lf.)	*Cinnamomum tamala*	Shulaghna, Vatik Vikar Har	• Reduces pain	10 mg
Nagkeshar (Stmn.)	*Mesua ferrea*	Vishghna, Jwarghna	• Anti-poisonous • Anti-pyretic	10 mg
Phoolpriyangu (Fr.)	*Callicatrpa macrophylla*	Vednahar, Deepan	• Reduces pain	10 mg
Neolotpal (Fl.)	*Nymphaea stelleta*	Dahashamak, Vedna Har	• Reduces burning sensation • Reduces pain	10 mg
Giloy (St.)	*Tinospora cordifolia*	Tridoshhar, Jwar – Vedna Har	• Anti-pyretic • Reduces pain	30 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Laung (Fl. Bd.)	*Syzygium aromaticum*	Shulaghna, Ruchikar	• Reduces pain	10 mg
Harad (Fr. Rind)	*Terminalia chebula*	Tridoshhar, Shoth Har	• Balances trisodhas • Reduces pain	20 mg
Baheda (Fr. Rind)	*Terminalia officinalis*	Bhedak, Vednahar	• Penetrating power • Reduces pain	20 mg
Amla (Fr. Rind)	*Emblica officinalis*	Tridoshhar, Rochak	• Balances trisodhas • Taste enhancing	20 mg
Bhrangraj (Wl. Pt.)	*Eclipta alba*	Shoth Har, Vranaghna	• Reduces swelling	10 mg
Makoy (Wl.Pt.)	*Solanum nigrum*	Shoth Har, Jwarghna	• Reduces swelling anti-pyretic	10 mg
Gunja (Rt.)	*Abrus precatorius*	Shothghna, Vatik Rog Har	• Reduces swelling, cures vatik diseases.	10 mg
Arjun (Bk.)	*Terminalia arjuna*	Vishghna, Vranghna	• Anti-poisonous,	10 mg
Yava (Sd.)	*Hordeum vulgare*	Jwaraghna, Agnivardhak	• Anti-pyretic • Increases apetite	10 mg
Haldi (Rz.)	*Curcuma longa*	Jwarghna, Shoth Har, Vedna Har	• Anti-pyretic reduces swelling	25 mg
Neem (Bk.)	*Azadirachta indica*	Jwarghna	• Anti-pyretic	20 mg
Nirgundi (Wl. Pt.)	*Vitex negundo*	Shothhar, Vedna Har	• Reduces swelling • Reduces pain,	20 mg
Fine Powder of:				
Abhrak Bhasma	Classical Preparation	Shoolghna, Jwarghna	• Reduces pain • Cures fever	42 mg
Lauh Bhasma	Classical Preparation	Panduhar, Jwara-Shoth Har	• Cure anemia • Fever • Reduces swelling	42 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Shilajit (exudate)	*Asphaltum punjabianum*	Shoth Har	• Reduces swelling,	50 mg
Rasraj Ras	Classical Preparation	Vatik Rog Har, Vednahar	• Balances vatik diseases • Reduces pain	20 mg

Eargrit Gold is Useful in:

- **Inflammation of Internal Ear (Labyrinthitis)**
- **Hearing Problems**
- **Acute Ear Problems**
- **Ear Ache**



Eargrit Gold: Description in Classical Texts:

Eargrit Gold tablets is prepared by a wonderful combination of traditionally used Ayurvedic drugs that are effective in ear related disorders. Shwet Sariva is madhur (sweet) in taste. Its properties are guru (heavy) and snigdha (unctuous). It pacifies vata, pitta and kapha doshas. It is useful in anorexia, cough, indigestion, poisoning and fever.

Mulethi is madhur (sweet) in taste, and has cold potency. Its properties are guru (heavy) and snighda (unctuous). It pacifies vata and pitta doshas. It acts as a tonic. It is useful in vomiting, abscess, phthisis, diseases caused by vitiation of blood. It is good for eye disease, and improves complexion.

Kushtha is sweet, bitter, and pungent in taste, and is having hot potency. It has lightness in it as a property. it pacifies vata and kapha doshas. It is useful in skin diseases. It has a pain-relieving effect.

Dalchini; It is sweet, bitter, and pungent in taste, and cold potency. It has lightness and dryness property. It has katuvipak. It pacifies vata, pitta doshas. It is aromatic.

Chhoti Elaichi is bitter in taste, and hot in potency. It has lightness and dryness property. It has katuvipak. It pacifies vata, kapha doshas. Useful in improving digestion and promote health.

Tejpatra is sweet in taste, and hot potency. It has lightness, sharpness and sliminess property. It pacifies vata, kapha doshas. Useful in rhinitis.

Nagkeshar is astringent in taste, and hot potency. It has lightness and dryness property. It pacifies vata, kapha doshas. It has katuvipak. Useful in indigestion, fever, pruritis, thirst, vomiting, skin diseases, erysipelas, poisoning.

Phoolpriyangu is pungent and astringent in taste, having cold potency. It has lightness, sharpness property. It pacifies vata, pitta doshas. Useful in buring sensation and fever.

Neelotpal is sweet, astringent and bitter in taste; with cold potency and madhuravipaka. This drug has the qualities of lightness, unctuousness and sliminess and it pacifies pitta and kapha doshas.

Giloy is pungent, bitter, astringent in taste, and has hot potency. It has lightness. It has madhurvipak. It pacifies vata, pitta, kapha doshas. It acts as a tonic & astringent. Useful in fever and anemia.

Laung has bitter and pungent tastes; qualities of lightness and unctuousness with cold potency and katu vipaka and pacifies kapha and pitta doshas.

Arjun has astringent taste, light property, cold potency. It pacifies pitta & kapha doshas. It acts as a cardiac tonic. And useful in poisoning, blood diseases, obesity, polyuria, ulcer, phthisis, consumption.

Harad is sweet, sour, pungent, bitter and astringent in taste, and hot potency. It has lightness, dryness property. It has madhurvipaka. It is an appetizer, good for improving capacity of the brain, and pacifies vata. It cures hoarseness of voice, tympanites, hiccough.

Baheda is kashaya in taste, and hot potency. It has lightness, drynessproperty. It has madhurvipak. It pacifies pitta & kapha doshas. It acts as laxative & anti-tussive.

Amla is sweet, sour, astringent in taste, and cold potency. It has heavyness property. It has madhurvipaka. It pacifies vata, pitta & kapha doshas. Its action is aphrodisiac. It is specialy indicated in bleeding diathesis & diabetes insipidus. It is good for improving capacity of the brain, prolongs life. It cures asthma, cough, hoarseness of voice, tympanitis etc.

Bhrangraj is pungent in taste, and hot potency. It has dryness, sharpness property. It pacifies vata and kapha doshas. It is useful in headache.

Makoy is pungent, bitter in taste, and hot potency. It has unctous property. It pacifies vata, pitta and kapha doshas. This drug promotes strength of individual.

Gunja is bitter and astringent in taste with katuvipaka and hot potency. It has the qualities of lightness and dryness and balances kapha and vata doshas.

Yava is sweet, astringent in taste, and hot in potency. It has lightness, sliminess property. It pacifies pitta, kapha doshas, but aggravates vata. Useful in throat diseases, cough, rhinitis. It acts as a tonic, nootropic and appetizer.

Haldi is pungent, bitter in taste, and hot potency. It has dryness property. It pacifies pitta dosha. Useful in disease caused by vitiation of blood.
Neem has cold potency, katuvipak and laghu property. It pacifies vata, pitta, kapha doshas. Useful in fatigue, anorexia.

Nirgundi is pungent, bitter and astringent in taste. It has lightness in it. It cures fever caused by vitiation of kapha. It acts as a Nootropic.

Abhrak Bhasma can cure indigestion, kapha roga, breathing difficulties and many other conditions. It can be given with honey, ghee, triphalakwath, guduchisvarasa orardrakasvarasa.

Lauh Bhasma can cure breathing difficulties, anorexia, cough, kapha rogas, anemia. It can be given with guduchisvarasa or sattva, honey, ghee, haridra rasa.

Shilajit is pungent, bitter in taste. It pacifies kapha. It has katuvipaka. Acts as a tonic and laxative. It cures anemia. It acts synergistically when gives with another drugs.

Rasrajras has an important therapeutic uses in deafness. It was given with pippalichurna and honey, marichachurna and ghrit for ear problems.

Scientific Evidence of Eargrit Gold:

Analysis of Eargrit Gold was performed with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector technique. In the analysis of Eargrit Gold, different compounds were obtained at 270 nm wavelength mainly gallic acid, methyl gallate, benzoic acid, eugenol. Similarly, at 420 nm wavelength bisdemethoxycurcumin, demethoxycurcumin and curcumin are observed. In the chromatograms, the blue line represents standards and the pink line represents the test sample, as shown in Fig. 1.

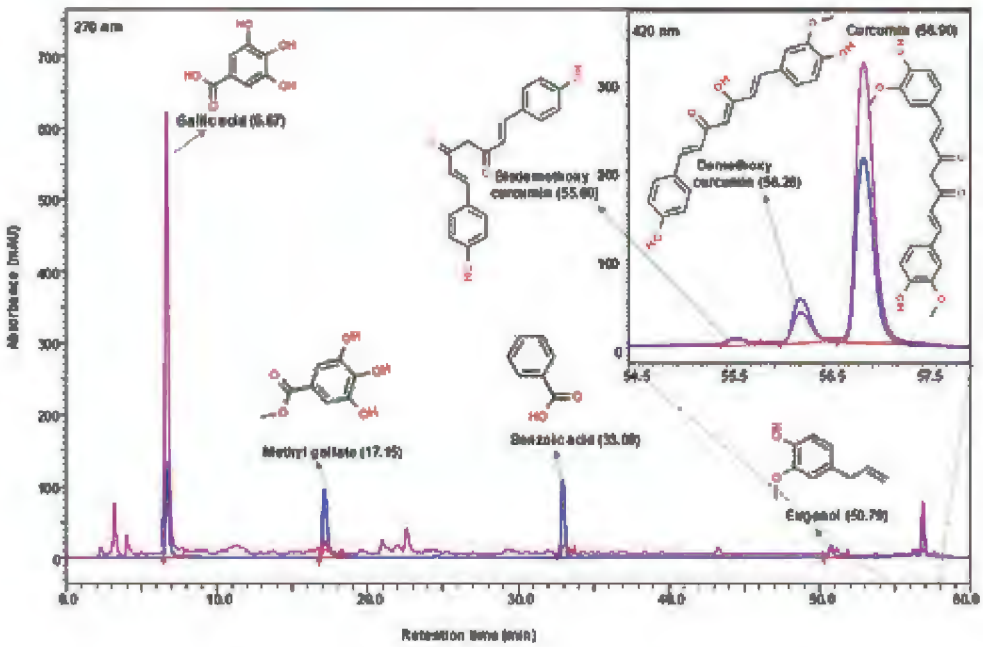


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Eargold tablet. The compounds in Eargrit gold tablet at 270 nm wavelength were mainly gallic acid, methyl gallate, benzoic acid, eugenol and at 420 nm bisdemethoxycurcumin, demethoxycurcumin and curcumin. In the overlay chromatograms, the blue line indicates the standards and pink line represents the test sample.

Dose and Method of Use of Eargrit Gold:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

eyegrit EYE DROPS आईग्रिट आई ड्रॉप्स

Introduction to Eye Allergies and Dryness of Eye:

Allergy symptoms include dry eyes and itching. Additionally, several allergy drugs might exacerbate eye dryness. Watering, redness, and burning can occur when the eyes are dry.

Dry eyes are a widespread problem that affects roughly 16 million individuals. Dry eyes can be caused by a variety of factors, including irritants and allergens such as smoking or pollen.

The eyes can be affected by five different forms of allergic disorders. They are, according to the American College of Allergy, Asthma, and Immunology (ACAAI), as follows:

- Seasonal or persistent allergic conjunctivitis
- Keratoconjunctivitis of the vernal equator
- Keratoconjunctivitis atopica
- Allergic conjunctivitis on touch
- Massive papillary conjunctivitis

Environmental factors, drugs, and underlying health disorders can all contribute to dry eyes.

The American Academy of Opthalmology (AAO) lists the following as probable reasons of dry eyes:

- Living in a dry climate or being exposed to strong winds
- Medical issues such as thyroid illness or rheumatoid arthritis
- Contact lenses over an extended period of time
- Long periods of looking at a computer screen
- A reaction to drugs such as antihistamines, antacids, beta-blockers, antidepressants, or anxiety medications
- A reaction to surgery

When the eyes get dry due to allergies or other factors, a person may feel the following symptoms: Itchiness, a sense that something is stuck in the eye, redness within or around the eyes, watery discharge from the eyes, a burning sensation, hazy vision, sensitivity to light of a burning sensation.

Managing eye problems involves taking preventive measures such as wearing glasses, using a dehumidifier to control mold in the house, washing hands after touching pets, staying indoors as much as possible during high pollen seasons by keeping windows closed, wearing sunglasses or protective glasses outside to prevent pollen from entering the eyes, using mite-proof bedding, and maintaining cleanliness in living spaces. After exposure to allergens, it's important to cleanse your face with water.

In addition to avoiding allergen exposure,

individuals may seek medical guidance for managing dry eyes through a range of over-the-counter (OTC) and prescription treatments. These options include decongestant eye drops, artificial tears, oral antihistamines, allergy injections, prescription eye drops, and non-sedating prescription antihistamines to prevent drowsiness.

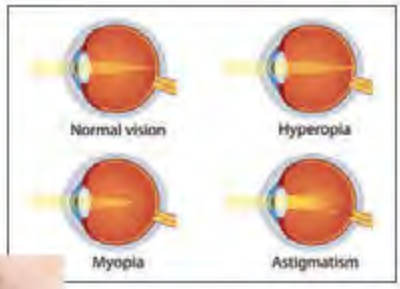
Ingredients and Medicinal Uses of Eyegrit Eye Drops:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 10 ml contains
Distillate of:				
Amla (Fr. Rind)	*Emblica officinalis*	Chakshushya, Rasayana	• Good for eyes • Rejuvenating	50 mg
Tulsi (Lf.)	*Ocimum sanctum*	Kaphaghna, Rakta vikara Har	• Pacifies Kapha • Alleviates diseases related to blood	500 mg
Haridra (Rz.)	*Curcuma longa*	Rakta dosha Har, Sothhar, Vishaghna	• Alleviates diseases related to blood • Anti-inflammatory • Anti-toxic	50 mg
Vidharikand (Tuber)	*Pueroria tuberosa*	Poshak, Shoth Har	• Nourishing • Anti-inflammatory	100 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Kaphaghna, Shoth Har	• Pacifies Kapha • Anti-inflammatory	500 mg
Nirgundi (Lf.)	*Vitex negundo*	Netrahita, Shoolaghna	• Good for eyes • Pain-relieving	500 mg
Sahjan (Lf.)	*Moringa oleifera*	Chakshushya, Shothaghna	• Good for eyes • Anti-inflammatory	500 mg
Rakt Chandan (Wd.)	*Pterocarpus santalinus*	Chakshushya	• Good for eyes	50 mg
Bahera (Fr.)	*Terminalia belerica*	Netrahita, Shoth Har	• Good for eyes • Anti-inflammatory	50 mg
Nimba (Lf.)	*Azadirachta indica*	Chakshushya	• Good for eyes	500 mg
Bhringraj (Wl. Pt.)	*Eclipta alba*	Shothaghna, Netraroga Har	• Anti-inflammatory • Alleviates eye diseases	500 mg
Other Ingredient:				
Gulab Lal	Classical Preparation	Chakshushya	• Good for eyes	100 mg
Saidhava Lavan	Classical Preparation	Lekhana	• Scrapes off accumulated doshas	10 mg
Pudina Satva (Lf.)	*Mentha piperata*	Balya	• Strengthening	2 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 10 ml contains
Kapur (Wd.)	*Cinnamomum camphora*	Chakshushya, Lekhana, Vishaghna	• Good for eyes • Scrapes off accumulated doshas • Anti-toxic	10 mg
Mukta Pishti	Classical Preparation	Pittahara	• Pacifies pitta	20 mg

Eyegrit Eye Drops is Useful in:

- **Keeping Eyes Fresh and Lubricated**
- **Keeps Eyes Free From Local Allergies**
- **Improving Vision**



Eyegrit Eye Drops: Description in Classical Texts:

Eyegrit Eye Drops is an Ayurvedic proprietary medicine prepared for overall eye health. Its major components like Amla comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, sour, astringent in taste and cold potency. It has heavy property and sweet vipaka. This drug pacifies vata, pitta & kapha doshas. It is good for management of malabsorption, abdominal diseases, vomiting, and diseases of liver and spleen.

Tulsi is pungent and bitter in taste with a hot potency, and has dryness as the main property. It pacifies vata and kapha doshas and aggravates pitta dosha. This herb is useful in skin diseases, dysuria, burning sensation, and diseases caused by vitiation of blood. It acts as a cardiac toner and appetizer.

Bhava prakasha has mentioned Haridra under Hareetakyadi Varga. It has pungent and bitter tastes. It pocess quality of dryness and is hot in potency. It pacifies kapha pitta doshas. It has anti-inflammatory action. It can cure blood related diseases. It has wound healing potential.

Vidarikand is sweet in taste. Mentoned under Guduchyadi varga in Bhava prakasha, this drug has the qualities of unctuousness and heaviness. It has cold potency. This drug is nourishing and pacifies vata and pitta doshas. it has rejuvenating action.

Punarnava is mentioned under Guduchyadi varga in Bhava prakasha. It is sweet, bitter and astringent in taste with the qualities of lightness and dryness in it. It is hot in potency and pacifies kapha vata doshas. It has katu vipaka. It is anti-inflammatory, cures anemia and is anti-toxic.

Nirgundi has pungent and bitter taste with qualities of dryness and sharpness; hot potency and katu vipaka. Sahjan has pungent and alkaline tastes with qualities of lightness, dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas.

Rakt chandan has bitter and sweet tastes with qualities of heaviness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas. Bahera comes under Haritakyadi varga in bhavprakash nighantu. It is astringent in taste, and hot potency with lightness and dryness properties, and sweet vipaka. It pacifies pitta & kapha doshas.

Neem pacifies vata, pitta, kapha doshas, has a hot potency, katu vipaka, and light property. It helps in management of skin diseases, and eye problems. Bhringraj has pungent and bitter tastes with qualities of dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas.

Gulab jal helps balance the Sadhaka Pitta that governs human heart. Apart from this, Rose can balance Vata, Kapha, and Pitta doshas. It is good for eyes. Saidhava lavan has lightness, unctuousness and minuteness in it. It has cold potency and pacifies all three doshas. Useful in eye diseases.

Pudina has pungent taste with qualities of lightness, dryness and sharpness; hot potency and katu vipaka. Pacifies kapha and vata doshas. Kapur has bitter, pungent and sweet tastes with properties of lightness and sharpness; hot potency and katu vipaka. It pacifies all three doshas and is good for eyes. Mukta pishti can alleviate mano doshas. It is prepared by taking mukta bhasma and triturate with rosewater. It pacifies pitta dosha.

Scientific Evidence of Eyegrit Eye Drops:

Eyegrit eye drops analyzed by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector which indicated the presence of two main marker compound at 280 nm wavelength namely Eugenol and Boervonone, as shown in Fig. 1. In the chromatograms, the blue line represents the standards and pink line shows the test sample.

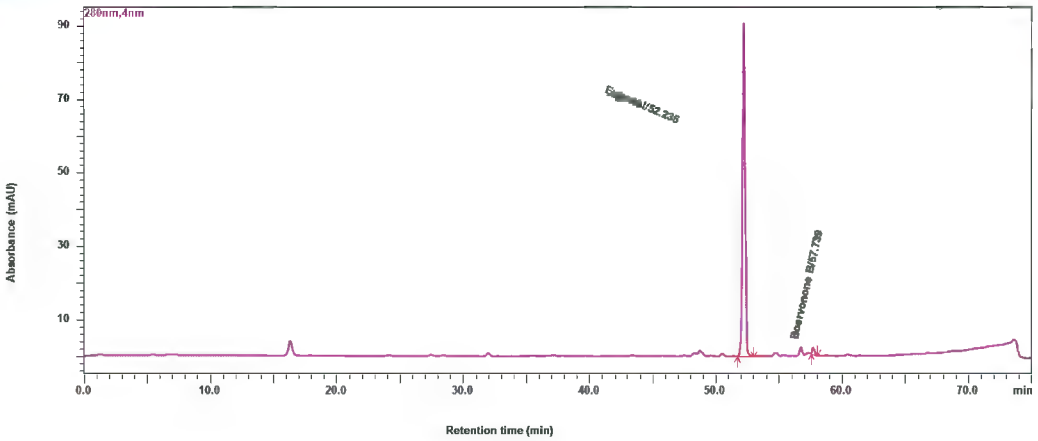


Fig. 1. Analysis of the Eyegrit eye drops by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. The two main compounds were obtained Eugenol (52.235 minutes) and Boervonone (57.739 minutes) at 280 nm wavelength. In the chromatograms, the blue line indicates the standards and pink line shows the test sample.

Dose and Method of Use of Eyegrit Eye Drops:

Dose and Frequency	2-3 drops, three times per day in an eye
Or as directed by the physician.	

Tablet

EYEGRIT GOLD आईग्रिट गोल्ड

Introduction to General Eye Weakness, Eye Inflammation, Dry Eye Symptoms:

Eye weakness is a very common problem, generally affecting 1 out of every 4 people. Typically, when a person experiences blurred vision when looking at objects, it may be a sign of underlying conditions such as myopia, hyperopia, presbyopia, and astigmatism. Myopia, for instance, is characterized by difficulties in seeing distant objects, while hyperopia causes issues with near objects. Presbyopia, on the other hand, hinders the ability to focus on objects, particularly closer to them. The medical term "ophthalmoplegia" is also used to describe eye weakness, particularly in relation to the weakening of eye muscles. This condition can affect one or more of the six muscles responsible for holding the eye in place and controlling eye movement. The treatment for eye weakness encompasses various options, including medications like vitamin A supplements, eye drops, glasses, and laser surgery.

Damage to the uvea, which is the middle layer of the eye, can lead to uveitis—a potentially painful inflammation inside the eye that may also impact other parts of the eye. Uveitis can affect one or both eyes and presents different types that target various parts of the eye. These types include anterior uveitis, which affects the iris at the front of the eye and is the most common and less serious form; intermediate uveitis, which affects the ciliary body and the vitreous; posterior uveitis, impacting the retina and choroid at the back of the eye; and panuveitis, which affects all parts of the uvea, from the front to the back of the eye. Common symptoms of uveitis comprise blurry vision, eye pain, red eyes, and sensitivity to light. Treatment typically involves the use of medicines like steroids to reduce eye inflammation, along with eyedrops, pills, and injections.

Dry eye is a common condition that occurs when tears fail to provide adequate lubrication for the eye. This can happen due to various reasons that disrupt the tear film, which is comprised of three essential layers: fatty oils, aqueous fluid, and mucus. These layers work together to maintain the surface of the eye lubricated, smooth, and clear. When any of these layers gets disrupted, it results in dryness of the eye. Several factors can contribute to tear film dysfunction, such as hormone changes, autoimmune diseases, inflamed eyelid glands, or allergic reactions. Risk factors for dry eyes include aging, specific medical conditions, corneal nerve desensitization, and deficiencies. Symptoms commonly associated with dry eyes include eye redness, sensitivity to light, blurred vision, eye fatigue, and the presence of stringy mucus around or in the eye. The treatment for dry eye depends on its type, and symptom relief

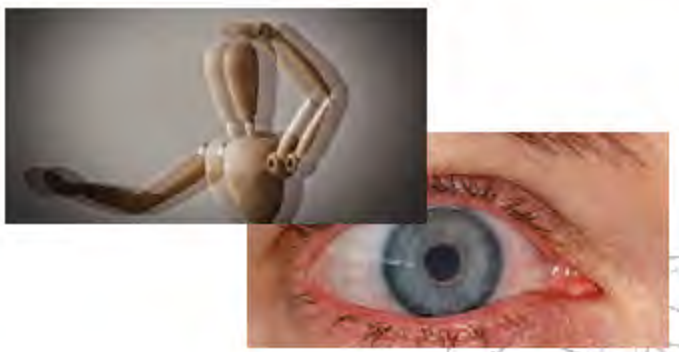
can be achieved through over-the-counter (OTC) eye drops, Lymphocyte Function-associated Antigen-1 (LFA-1) blockers, calcineurin inhibitor immunosuppressants, tear duct plugs, and, if necessary, surgical interventions.

Ingredients and Medicinal Uses of Eyegrit Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Amla (Ft.)	*Emblica officinalis*	Chakshushya, Rasayan, Tridosh Har	• Good for eyes • Rejuvenating • Pacifies all three doshas	160 mg
Gajar (Rt.)	*Dancus carota*	Balya, Poshak (Rich in Vit.A), Agni Deepak	• Strengthening • Nourishes eyes • Increases digestive fire	10 mg
Bhringraj (Wl.Pt.)	*Eclipta alba*	Chakshushya, Deepan, Panchan	• Good for eyes • Increases digestive power	80 mg
Fine Powder of:				
Saptamrit Lauh	Classical Preparation	Sarv Netra Vikar Har, Jathragni Vardhak	• Alleviates all eye-diseases • Increases digestive fire	160 mg
Mukta Shukti Pishti	Classical Preparation	Netra Rog Har	• Alleviates eye-diseases	80 mg
Moti Pishti	Classical Preparation	Chakshushya, Kanti Vardhak	• Good for eyes • Increases complexion	30 mg
Rajat Bhasma	Classical Preparation	Netra Vikar Har, Twachya	• Alleviates eye-diseases • Good for skin	20 mg
Rasraj Ras	Classical Preparation	Tridosh Shamak, Shakti Dayak	• Pacifies all three doshas • Strengthening	15 mg

Eyegrit Gold is Useful in:

- **General Eye Weakness**
- **Eye Inflammation**
- **Watery or Dry Eyes**
- **Blurred or Double Vision**



Eyegrit Gold: Description in Classical Texts:

Amla comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, sour, astringent in taste and cold potency. It has heavy property and sweet vipaka. This drug pacifies vata, pitta & kapha doshas.

Gajar has sweet and bitter tastes with qualities of lightness and sharpness; hot potency and madhura vipaka. It pacifies all three doshas.

Bhringraj has pungent and bitter tastes with qualities of dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas.

Saptamrit Lauh is a classical medicine containing Mulethi, Amla, Behada, Harad and Lauh Bhasma in equal parts and consumed with honey and ghee. This is indicated in all sorts of eye-diseases.

Muktashukti pishti is used for various conditions from indigestion to cancer. It has sweet and pungent tastes and is useful in gastritis.

Moti pishti can alleviate mano doshas. It is prepared by taking mukta bhasma and triturate with rosewater. It pacifies pitta dosha.

Rajat bhasma has astringent and sour tastes as per Rasa Ratna Samucchaya. It has cold and unctuous qualities and pacifies vata and kapha doshas and scrapes off accumulated doshas from the body and also promotes intelligence.

Rasraj Ras has important therapeutic uses in facial paralysis, brain diseases, diseases due to vata dosha, and fatigue. It can be given with pippali churna and honey, maricha churna, and ghrit.

Scientific Evidence of Eyegrit Gold:

Eyegrit Gold was analysed by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Eyegrit Gold, the different compounds were observed at 270 nm wavelength mainly Gallic acig at 10.578 minutes, 5-hydroxyl methyl furfural (5-HMF) at 13.686 minutes, Methyl gallate at 28.105 minutes, corilagin at 40.367 minutes, chebulagic at 45.207 minutes, chebulanic acid at 47.692 minutes, and ellagic acid at 48.439 minutes, as shown in Fig. 1. In the chromatograms, the blue line represent the standards and pink line shows the test sample.

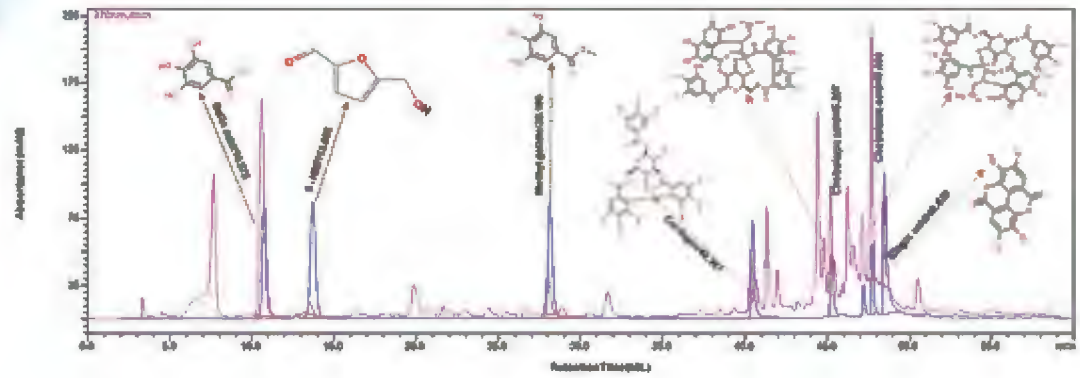


Fig. 1. Analysis of Eyegrit Gold by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Eyegrit Gold, the different compounds were observed at 270 nm wavelength: Gallic acig at 10.578 minutes, 5-hydroxyl methyl furfural (5-HMF) at 13.686 minutes, Methyl gallate at 28.105 minutes, corilagin at 40.367 minutes, chebulagic at 45.207 minutes, chebulanic acid at 47.692 minutes, and ellagic acid at 48.439 minutes. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of Eyegrit Gold:

Dose and Frequency	2 Tablets in a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Chewable Tablet

KANTHAMRIT
कण्ठामृत

Introduction to Cough, Cold, Sore Throat, and Hoarse Voice:

Acute Upper Respiratory Tract virus Infections (URTIs) are the most common human illnesses, with adults experiencing two to five common colds per year and school-aged children experiencing seven to ten colds per year. The symptoms of a cold can include a coughing, sore throat, runny or stuffy nose, and sneezing. The symptoms of URTIs are so common that self-diagnosis of common cold or influenza (flu) is normal among the general public and clinical diagnosis is usually the only diagnosis used by the physician. Over 200 serologically different viral types are responsible for human URTIs, with the rhinoviruses being the most common cause. Viruses that causes colds can spread from person to person through the air and close personal contact. You can prevent colds by doing your best to stay healthy and by helping keep others healthy. This includes: cleaning your hands, avoiding close contact with individuals who have colds or any other upper respiratory infections, covering your nose and mouth when sneezing and coughing, avoiding touching your eyes, mouth, and nose with unwashed hands, and not smoking.

A sore throat is characterized by scratchiness, irritation of the throat, and pain, which often worsens when you swallow. It may start with a scratchy, dry sensation in the throat or a sensation of burning. As the sore throat worsens, you might experience a searing pain when swallowing or talking, and you could also feel pain in your ears or down the side of your neck. The most common cause of pharyngitis (sore throat) is a viral infection, such as the flu or the common cold. Sore throats due to viruses usually resolve on their own.

Strep throat (streptococcal infection) is a less common type of sore throat caused by bacteria and requires treatment with antibiotics to prevent complications. Additionally, less common causes of sore throat might necessitate more complex treatment. Common symptoms of a sore throat include pain that worsens with swallowing or talking, difficulty swallowing, swollen and red tonsils, white patches or pus on the tonsils, a scratchy sensation or pain in the throat, sore and swollen glands in the neck or jaw, and a hoarse or muffled voice.

Hoarse voice, also known as dysphonia, refers to having an abnormal voice. These changes in the voice can occur suddenly or gradually over time. The voice can be described as weak, breathy, hoarse, rough, strained, raspy, or gravelly. There may be breaks in the voice, where it completely cuts out or stops. Pitch changes, either lower or higher, may occur

for the individual. The patient might also experience temporary complete voice loss. Sometimes, the patient may complain of pain when speaking or singing, as well as difficulty projecting their voice.

Dysphonia is most commonly caused by issues with the vocal cords, also known as vocal folds. However, it can also result from problems with airflow from the lungs or anomalies in the structures of the neck surrounding the vocal cords.

There are various causes of hoarse voice, including Laryngitis: Swelling in the vocal cords due to overuse of the voice or a viral illness. Allergies: Swelling of the vocal cords caused by coughing, sneezing, or postnasal drip. Laryngopharyngeal reflux: Stomach reflux causing swelling and irritation of the delicate tissues of the vocal cords and throat.

Infections that lead to a sore throat may result in other signs and symptoms, including fever, runny nose, cough, sneezing, nausea, vomiting, headache, or body aches.

Ingredients and Medicinal Uses of Kanthamrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Mulethi (Rt.)	*Glycyrrhiza glabra*	Kanth Rog Har, Kasaghna	• Alleviates diseases of throat • Alleviates cough	24.95 mg
Sonth (Rz.)	*Zingiber officinale*	Swarbhanga, Galshoth Har	• Alleviates dysphonia • Alleviates throat inflammation	3.74 mg
Baheda (Fr.)	*Terminalia bellirica*	Kasaghna	• Alleviates cough	3.74 mg
Kabab Chini (Fr.)	*Piper cubeba*	Kashar, Kanthdosh Har	• Alleviates cough • Alleviates disorders of throat	2.49 mg
Kali Mirch (Fr.)	*Piper nigrum*	Svasa Har	• Alleviates asthma	0.62 mg
Pudina Sat (Lf.)	*Mentha piperata*	Mukhdosh Har, Sthanik Sangya Har	• Alleviates disorders of mouth and throat • Local anesthetic	4.99 mg
Kapoor (Wd.)	*Cinnamomum camphora*	Mukhdosh Har, Sthanik Sangya Har	• Alleviates disorders of mouth and throat • Anti-inflammatory • Alleviates cough	2.49 mg
Oil of:				
Lavang (Fl. Bud)	*Caryophyllus aromaticus*	Kanthya, Kashar	• Good for throat • Alleviates cough	0.5 mg

Kanthamrit is Useful in:

- **Sore Throat**
- **Hoarse Voice**
- **Cough and Cold**

Kanthamrit: Description in Classical Texts:

Kanthamrit chewable tablet is an Ayurvedic proprietary medicine useful in cough, cold and sore throat. It includes drugs like mulethi, Kali mirch, lavang etc. which are used by Ayurvedic physicians to treat various respiratory diseases. Mulethi comes under Haritakyadi varga in bhavprakash nighantu. It is sweet in taste, and cold potency. It is heavy, unctuousness in nature and pacifies vata, pitta doshas. This drug is useful in diseases of throat.

Sonth comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste. Physical property is lightness and unctousness. This drug is hot in potency and pacifies vata, kapha doshas. It use as remedy for cough, cold, and asthma. Baheda comes under Haritakyadi varga in bhavprakash nighantu. It is astringent in taste, and hot potency with lightness and dryness properties, and sweet vipaka. It pacifies pitta & kapha doshas.

Kabab/Gandha maricha ha pungent bitter tastes with qualities of lightness, dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas. It enhances taste perception and help alleviate breathing disorders. Kali Mirch/Marich is one among Trikatu. Its tastes are pungent and bitter with qualities of lightness, dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas.

Pudina has pungent taste with qualities of lightness, dryness and sharpness; hot potency and katu vipaka, pacifies kapha and vata doshas. Kapur has bitter, pungent and sweet tastes with properties of lightness and sharpness; hot potency and katu vipaka. It pacifies all three doshas and is good for eyes. Lavang has bitter and pungent tastes; qualities of lightness and unctuousness with cold potency and katu vipaka and pacifies kapha and pitta doshas.

Scientific Evidence of Kanthamrit:

Phytochemical study was conducted at Patanjali Research Foundation to confirm the presence of metabolites in Kanthamrit Chewable Tablet. The composition shown in the table indicates the presence of both polar and nonpolar compounds. Two different types of techniques, High Performance Liquid Chromatography with Photo Diode Array Detector (HPLC-PDA) and Gas Chromatography with Mass Detector (GC MS/MS) were used to identify and quantify the phytochemicals present in Kanthamrit. Fig. 1 confirms the presence of gallic acid, methyl gallate, eugenol and piperine by HPLC and Fig.2 confirms camphor, menthol and eugenol by GC MS/MS. These phytochemicals were further confirmed by analyzing the sample and reference standard under similar conditions and comparing the retention time and profile.

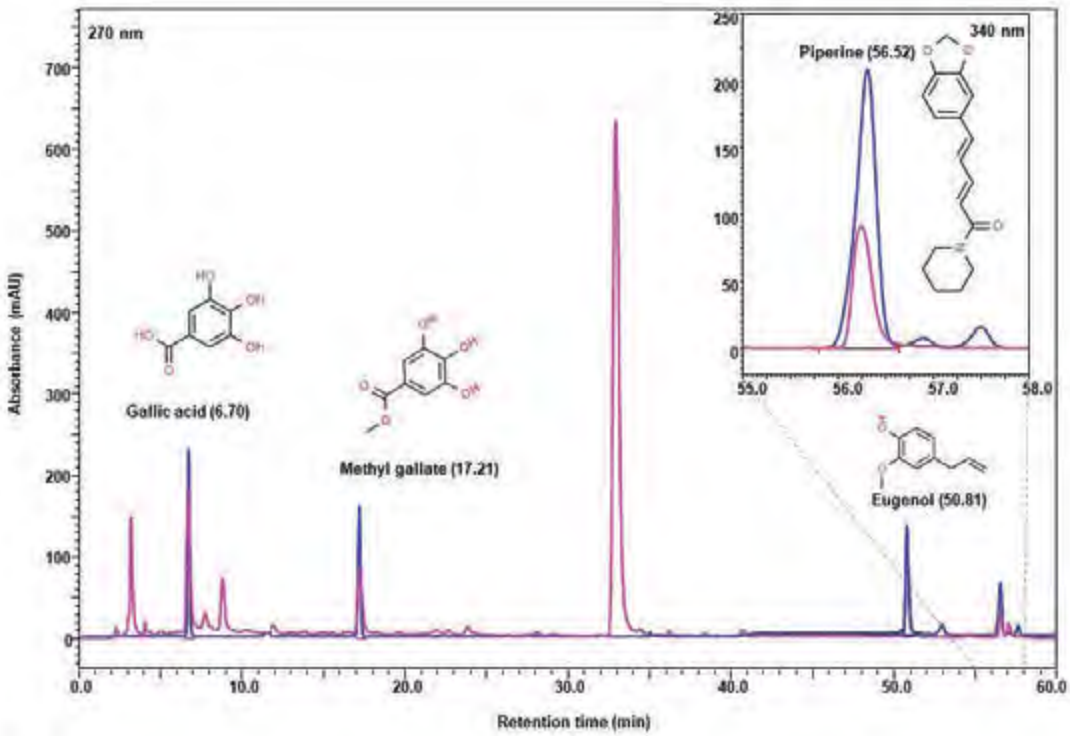


Fig 1: High Performance Liquid Chromatography (HPLC) method shows the presence of gallic acid, methyl gallate, eugenol at 270 nm wavelength and piperine at 340 nm wavelength. Blue chromatogram represent reference standard and pink represent Kanthamrit.

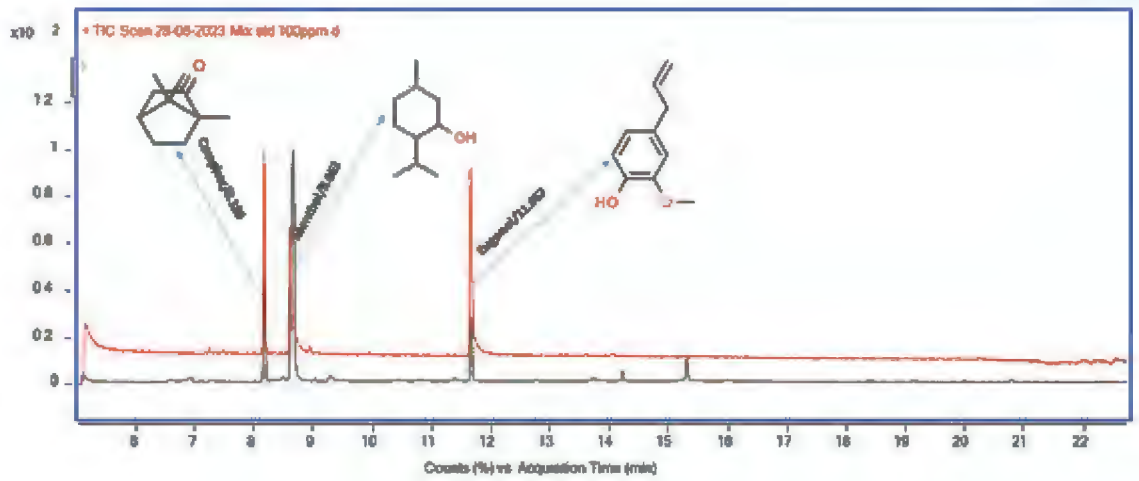


Fig 2: Gas Chromatography with mass detector (GC MS/MS) confirms the presence of camphor, menthol and eugenol in kanthamrit tablet.

Dose and Method of Use of Kanthamrit:

Dose and Frequency	1-2 Tablets, four times a day
Or as directed by the physician.	

Tablet

THYROGRIT थायरोग्रिट

Introduction to Thyroid Problems:

The thyroid is a butterfly-shaped gland situated at the front of the throat and is responsible for maintaining vital functions in our body. It releases three hormones, namely triiodothyronine (T3), thyroxine (T4), and calcitonin. Hypothyroidism can be of primary, secondary, or tertiary type. Primary hypothyroidism results from the low efficiency of the thyroid gland. Secondary hypothyroidism results from the decreased production of Thyroid-Stimulating Hormone (TSH), and tertiary hypothyroidism results from decreased production of thyrotropin-releasing hormone. It has been observed that 5% of the general population suffers from hypothyroidism, of which 99% belong to primary hypothyroidism.

Hypothyroidism, also known as underactive thyroid, is a common illness caused by thyroid hormone deficiency. It is easily diagnosed and managed but can be potentially lethal in severe cases if left untreated. The definition of this disorder is based on statistical reference ranges of certain relevant biochemical parameters and remains a matter of debate to this day. Clinical manifestations of hypothyroidism range from life-threatening to having no signs or symptoms at all. The most common symptoms in adult patients include tiredness, lethargy, intolerance to cold, abnormal weight gain, constipation, changes in voice like roughness, reduced range, and vocal fatigue, as well as dry skin. However, clinical presentation can vary with factors like age and sex. The standard treatment is thyroid hormone replacement therapy with levothyroxine. However, a substantial proportion of patients who reach biochemical treatment targets continue to have persistent complaints.

The term 'Hyperthyroidism' describes a syndrome associated with excess production of thyroid hormone. There is a general misconception that the words 'thyrotoxicosis' and 'hyperthyroidism' are synonymous. Thyrotoxicosis indicates a state of excess thyroid hormone exposure to tissues. Although hyperthyroidism can lead to thyrotoxicosis, it is important to note their differences. Hyperthyroidism can be overt or subclinical. Overt hyperthyroidism refers to low or suppressed thyroid-stimulating hormone (TSH) levels with elevated triiodothyronine (T3) levels and/or elevated thyroxine (T4) levels. Subclinical hyperthyroidism occurs when TSH levels are low or suppressed with normal triiodothyronine and thyroxine levels. Both of these conditions are associated with significant long-term complications.

A Goiter is a swelling in the neck caused by an enlarged thyroid gland. It can be caused by a variety of factors, including hypothyroidism, hyperthyroidism, and thyroiditis, among others. Even though this condition is generally harmless and occurs without pain, it is crucial to identify and treat the underlying disease that may lead to complications.

Ingredients and Medicinal Uses of Thyrogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Dhaniya (Fr.)	*Coriandrum sativum*	Shoola Hara, Tridosha Hara, Trishna Hara	• Pain relieving • Pacifies all three doshas • Alleviates thirst	50 mg
Kachnar Chhal (Bk.)	*Bauhinia variegata*	Galgand-Granthi Rog Har, Shoth Har	• Cures Thyroid disorders • Cures tumors • Anti-inflammatory	100 mg
Singhada (fr.)	*Trapa bispinosa*	Deepan, Balkarak	• Increases Digestion • Strength promoting	50 mg
Baheda (Fr. Rind)	*Terminalia bellerica*	Shothaghna, Virechak	• Anti-inflammatory • Purgative	50 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Vishaghna, Shoth Har, Pandu Har	• Eliminates toxins • Anti-inflammatory • Cures anemia	50 mg
Fine Powder of:				
Trikatu (Sunthi (Rz.), Marich (Fr.), Pippali (Fr.))	Classical Preparation *(Zingiber officinale, Piper nigrum, Piper longum)*	Shulaghna, Gulma Har, Aam Pachak, Agnivardhak	• Pain relieving • Cures abdominal swelling • Digests residual metabolic wastes • Increases digestive power	100 mg
Shudh Guggul (Exidate Gum Resin)	*Commiphora wightii*	Shoth-Vedana Har, Gulma-Granthi Shoth Har	• Anti-inflammatory • Pain relieving • Cures abdominal swelling • Cures tumors	100 mg

Thyrogrit is Useful in:

- **Galgand**
- **Hypothyroidism**
- **Hyperthyroidism**
- **Goiter**

Thyrogrit: Description in Classical Texts:

Thyrogrit is an Ayurvedic proprietary medicine that has been made up of extracts of herbs that are traditionally used and explained in the science of Ayurveda in therapy of thyroid diseases.

Dhanyaka/ Dhaniya is mentioned under Hareetakyadi varga in bhava prakasha. It has astringent and bitter tastes. It has light and unctuous qualities and hot in potency. It has madhura vipaka and can pacify all three doshas (vatta, pitta and kapha).

Kanchnar has astringent taste and light and dry qualities. Bhava prakasha mentions this drug under Guduchyadi varga. This drug has katu vipaka. It is cold in potency and pacifies kapha and pitta doshas. By its prabhav, it is Gandamala nashana, curing thyroid disorders.

Shringataka/Singhada extract, mentioned under Phala varga in Bhava prakasha, has sweet and astringent tastes. It has heavy and dry qualities. it has madhura vipaka and is cold in potency, it pacifies pitta dosha.

Metioned under Hareetakyadi varga, Baheda/ Bibhitaki has astringent taste and possess qualities like dryness and lightness. Its vipaka is madhura and is hot in potency.

Trikatu is combination of sunti, pippali and maricha. It is mentioned under Hareetakyadi varga in Bhava prakasha. It enhances digestive power and pacifies kapha dosha.

Punarnava comes under Guduchyadi varga in Bhava prakasha. It has sweet, bitter and astringent in taste. It has the qualities of lightness and dryness. It has katu vipaka and is hot in potency. It pacifies kapha and vata doshas. It has anti-inflammatory and increases digestive power.

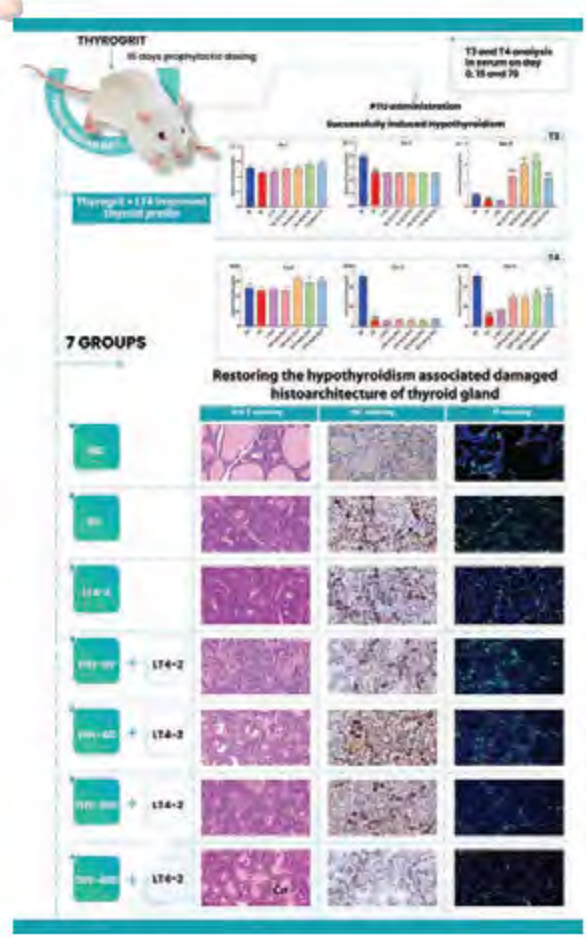
Guggulu has bitter and pungent tastes. It is placed in Karpooradi varga by Bhava prakasha. It pocess the qualities of lightness, dryness and clarifying the channels in body. It is hot in potency and has katu vipaka. It balances all three doshas. It can help cure tumors and is helpful in thyroid disorders.

Scientific Evidence of Thyrogrit:

Thyrogrit was prepared by using classical references of Ayurveda, and Patanjali Research Foundation has done detailed research works on its safety and efficacy as well.

Thyrogrit has phytoconstituents which have potential thyroid modulatory activity. Thyrogrit helped restore thyroid hormones in propylthiouracil-induced hypothyroidism in rats. Thyrogrit decreased the damage in kidney function induced by propylthiouracil. It alleviated propylthiouracil-induced damaged histoarchitecture of thyroid, even on repeated administration for 90 days orally, it was found to be safe.

This tablet is enriched with many diverse phytoconstituents, which are evidenced and



properly documented to target mechanisms including oxidative stress as well as inflammatory states and additionally they have a stimulant effect of the thyroid gland.

The details of the study conducted at Patanjali Research Foundation is shown in Fig 1. Serum triiodothyronine and thyroxine (T3 and T4), weights of liver, kidney and thyroid were taken after euthanizing the animals. Thyroid was studied by hematoxylin and eosin staining, immunohistochemistry and immunofluorescence.

Fig. 1. Graphical abstract of the study conducted at Patanjali Research Foundation.

The study used female Wistar rats which were allocated to seven groups, Normal Control, Disease Control, administered through levothyroxine and other four groups received Thyrogrit in different doses of 20, 60, 200 and 600 mg/day orally. Thyrogrit was given 15 days prior to the disease induction and was continued throughout the whole study. Serum triiodothyronine and thyroxine (T3 and T4) was assessed and recorded on day 0 (baseline) for all animals. Propylthiouracil at dose of 8 mg/day was given orally for all except Normal Control throughout the study. Disease development was assessed 15 days after administering propylthiouracil and from Day 45, all groups except Disease control and Normal control were given levothyroxine in suboptimal dose of 2 µg/day till end of the study, detailed study is shown in Fig. 2.

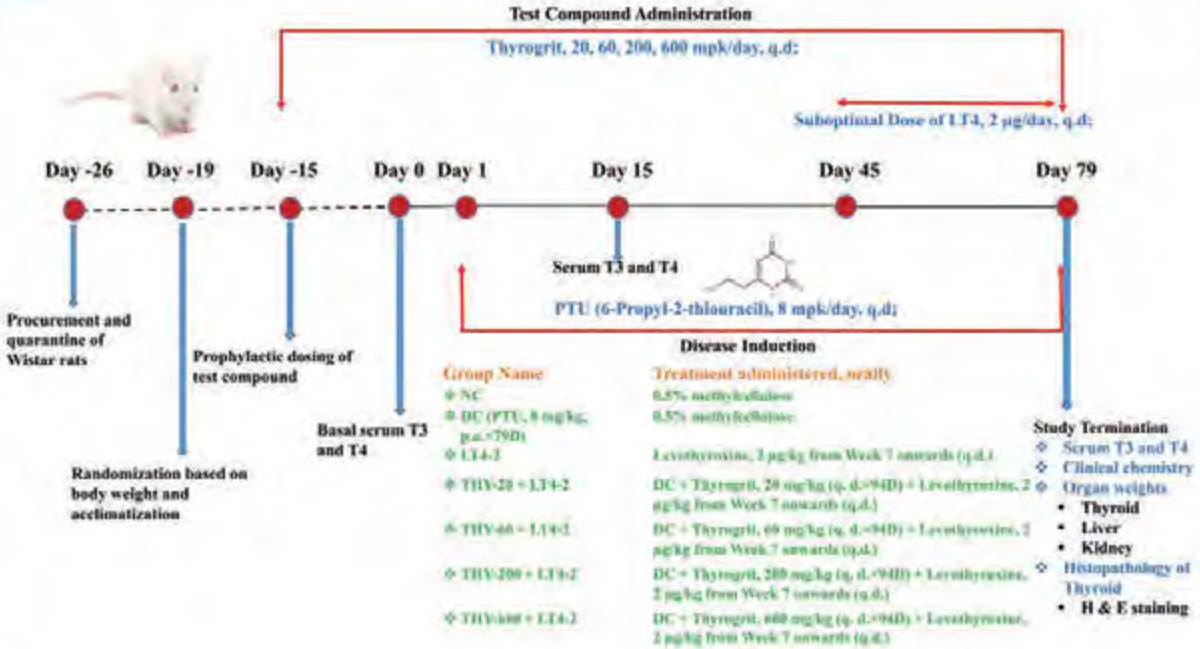


Fig. 2. Analytical study of Thyrogrit was conducted on UHPLC-PDA. Seven phytochecmicals were identified and quantified. Chromatogram in pink and blue refer to the sample and reference standard respectively. Major identified and quantified in Thyrogrit are gallic acid, protocatechuic acid, corilagin, ellagic acid, piperine, guggulsterone E and guggulsterone Z.

Reverse phase Ultra-High-Performance Liquid Chromatography (UHPLC) equipped with Photodiode Array (PDA) detector was used to study the phyto chemical constituents of Thyrogrit. The chromatogram was recorded at 250 nm and 270 nm of wavelength depending upon their maximum absorbance. Each milligram of Thyrogrit powder contained gallic acid (5.297 µg), protocatechuic acid (0.070 µg), corilagin (0.345 µg), ellagic acid (1.530 µg), piperine (3.361 µg), guggulsterone E (0.116 µg) and guggulsterone Z (0.213 µg). The UHPLC chromatogram of identified molecules at different wavelengths was shown in Fig. 3

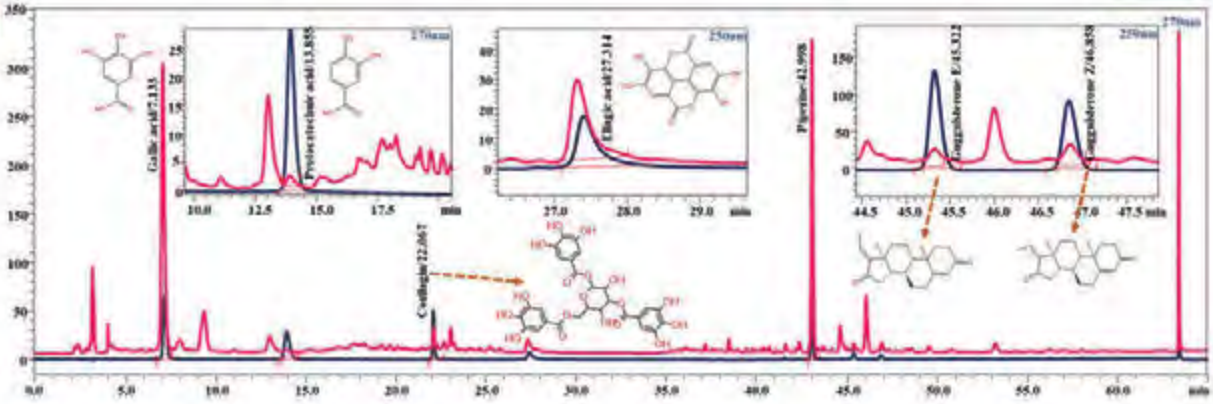
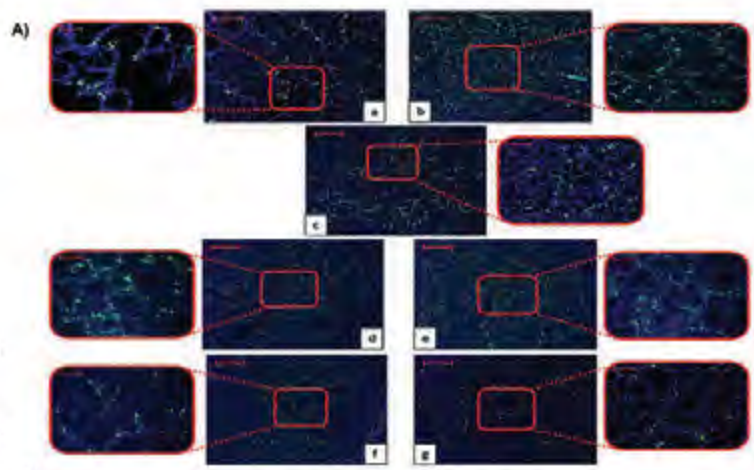


Fig. 3. Schematic diagram of the in-vivo experiment. Following quarantine and acclimatization, Thyrogrit in four different doses (20, 60, 200 and 600 mpk/day) was administered 15 days prior to disease induction and continued till the end of the study. Basal readings of serum triiodothyronine and thyroxine (T3 and T4) were recorded for all animals on day 0 of experiment. Subsequently, Propylthiouracil (PTU) (8 mpk/day) was given orally to all animals (except NC group) and continued till the end of study. After 15 days development of hypothyroidism was assessed by recording serum T3 and T4 levels. On day 45 onwards all animals except NC and DC, were administered with suboptimal dose of levothyroxine(LT4) (2 µg/day) till the end of study. On day 79, animals were euthanized and serum T3 and T4 as well as weight of Liver, Kidney and Thyroid were measured. Histopathology of Thyroid was evaluated through H&E staining and immunohistochemical and immunofluorescence analysis for C-cell hyperplasia.

Thyrogrit when administered with a low dose of levothyroxine restored the propylthiouracil -induced decrease in the serum levels of triiodothyronine and thyroxine (T3 and T4) and improved propylthiouracil-induced renal damage. Also, co-administration of Thyrogrit and levothyroxine did not show any significant non-clinical safety concerns even after being given for more than twelve weeks. Moreover, its administration amended the signature histopathological appearances associated with hypothyroidism and C-cell hyperplasia. Fig. 4



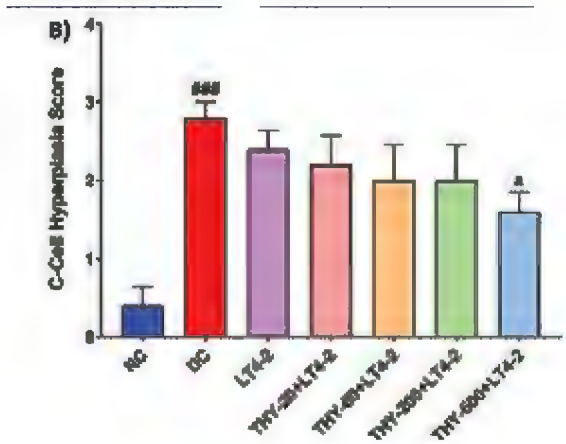


Fig. 4. Effects of THY+LT4-2 on the parafollicular or C-cell population around follicular acini of thyroid associated with hypothyroidism. (A) Photomicrographic images (Immunolabelling with antibody against calcitonin, × 100 and × 400, Scale=100µm) of the thyroid gland of (a) NC group rat showing normal population of C-cell appearing as brownish deposition scattered in the section; (b) DC group rat exhibiting diffuse C-cell hyperplasia; (c) Levothyroxine (2 µg/kg) treated rat showing no significant ameliorating effect on pathological changes observed in DC rats; (d, e and f) Rats treated with THY+LT4-2 (20, 60 and 200 mg/kg respectively) exhibiting minimal reduction in increased Ccell population; (g) Rats treated with THY+LT4-2 (600 mg/kg) exhibiting significant reduction in increased C-cell population. (B) Depicts percentage area of C-Cells. All data is presented as Mean ± SEM (N=6 animals per group) and was statistically analyzed by employing one-way ANOVA followed by Dunnett's multiple comparison test. #### designates significant difference with respect to NC ($p < 0.0001$) whereas ** depicts a statistically significant effect when compared to DC ($p<0.01$).

The study concluded that co-administration of Thyrogrit and levothyroxine improves the propylthiouracil-evoked alterations in the thyroid histopathology and function, abrogates hypothyroidism related renal damage and demonstrated a basic safety profile as well.

Dose and Method of Use of Thyrogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Capsule

SWASARI GOLD
श्वासारि गोल्ड

Introduction to Respiratory Conditions:

Respiratory disease is a type of disease that affects the lungs and other parts of the respiratory system. It is also called lung disorder and pulmonary disease. These could be caused by infections, by active or passive smoking of tobacco or exposure to radon, asbestos, or other forms of air pollution. Respiratory diseases include asthma, Chronic Obstructive Pulmonary Disease (COPD), pulmonary fibrosis, pneumonia, lung cancer etc.

Asthma is a chronic respiratory condition that affects people of all ages and is distinguished by reversible episodes of coughing, shortness of breath, wheezing, and chest tightness. It is a chronic inflammatory illness with mild to severe symptoms. Asthma affects 1-18% of the global population, and it is estimated that more than 300 million individuals worldwide suffer from asthma. 5-10% of individuals have severe asthma. Although the severe variety affects a lower number of individuals, it contributes a greater share of the overall illness burden. According to European Respiratory Society (ERS)/American Thoracic Society (ATS) Severe asthma has been defined as "the phenotype, which requires treatment with high-dose inhaled corticosteroids plus a second controller (and/or systemic corticosteroids) to prevent it from becoming 'uncontrolled' or which remains uncontrolled despite this therapy".

Pulmonary Fibrosis (PF) is a progressive, lethal lung disease and irreversible and has remained a challenge for researchers and clinicians. In the lungs, tissue damage coupled by cellular inflammation induces fibrotic response and hence plays an important role in the aetiology of fibrosis. Idiopathic pulmonary fibrosis is a progressive, chronic lung condition. This disorder causes scar tissue called fibrosis to form in the lungs, preventing the lungs from adequately transporting oxygen into the circulation. People between the ages of 50 and 70 are most commonly affected by the condition. Idiopathic pulmonary fibrosis is one of several illnesses known as Interstitial Lung Diseases (commonly known as ILD), which are lung diseases characterized by inflammation or scarring in the lung.

Acute Upper Respiratory Tract virus Infections (URTIs) are the most common human illnesses, with adults experiencing two to five common colds per year and school-aged children experiencing seven to ten colds per year. The symptoms of a cold can include a coughing, sore throat, runny or stuffy nose, and sneezing. The symptoms of URTIs are so common that self-diagnosis of common cold or influenza (flu) is normal among the general public and clinical diagnosis is usually the only diagnosis used by the physician. Over 200 serologically different

viral types are responsible for human URTIs, with the rhinoviruses being the most common cause. Viruses that causes colds can spread from person to person through the air and close personal contact.

Ingredients and Medicinal Uses of Swasari Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Fine Powder of:				
Trikatu (Sunthi (Rz.), Marich (Ft.), Pippali (Ft.))	Classical Preparation *(Zingiber officinale, Piper nigrum, Piper longum)*	Kasa-Swas,-Peenas Har, Shulaghna	• Useful in cough • Cold • Reduces pain	119.05 mg
Swasari Rasa	Proprietary Preparation	Jwaraghna, Kasa-Swas Har	• Useful in fever & cough.	119.05 mg
Sitopaladi Churna	Classical Preparation	Kasa-Kashya-Swasahar, Kaph Nissarak	• Useful in cough • Tuberculosis	119.05 mg
Abhrak Bhasma	Classical Preparation	Pandu-Raktapitta Har, Jeerna, Swas-Kasa Har	• Useful in anemia, bleeding disorders • Chronic cough	59.52 mg
Swarn Vasant Malti Rasa	Classical Preparation	Jeerna Jwar Har, Shoth Har	• Useful in chronic fever • Reduces inflammation	11.90 mg
Moti Pishti	Classical Preparation	Dahashamak, Saumya, Pittaj Vikar Har	• Reduces burning sensation • Useful in pitta related diseases	11.90 mg
Godanti Bhasma	Classical Preparation	Kasa-Swasa Har, Jwaraghna	• Useful in cough & fever	59.52 mg

Swasari Gold is Useful in:

- **Severe Asthma**
- **Lung Fibrosis**
- **Cough and Cold**

Swasari Gold: Description in Classical Texts:

The formulation of Swasari Gold was developed in such a way that it includes very potent plants used in Ayurveda for treating respiratory ailments. Trikatu churna comes under Haritakyadi Varga. It is obtained by mixing Shunthi, Pippali, Maricha in the ratio of 1:1:1. It is hot in potency and having Madhura vipaka. It is helpful in cough, chronic rhinitis, asthma. It can be given with honey, warm water.

Swasari Rasa ingredients include: Mulethi, Lavang, Dalchini, Kakdasingi, Rudanti, Sounth, Chhoti Pipal, Abhrak Bhasma, Mukta Shukti Bhasma, and Kapardak Bhasma. This drug is effective in various conditions associated with respiratory system. Sitopaladi churna is obtained by mixing Sitopala, Vamsarocana, Pippali, Ela, Twaka in the ratio of 5:4:3:2:1. It pacifies kapha and vata doshas and can alleviate anorexia, indigestion, pittaja swasa, fever, cough, pain in flanks and tuberculosis. This is usually given with ghee or honey.

Abhrak Bhasma can cure kapha roga, breathing difficulties, fever, cough, anemia. It can be given with honey, ghee, triphala kwath, guduchi svarasa, ardraka svarasa. Swarn Vasant Malti Rasa is obtained by mixing svarna bhasma, mukta bhasma, darada shuddha(hingul), marica, kharpara bhasma, navanita, nimbu svarasa; and is helpful in chronic fever and chronic cough. It can be given with pippali churna and honey.

Moti Pishti is helpful in pittaj vicar and reduces burning sensation. It can be given with honey, butter milk. Godanti Bhasma can cure indigestion, pitta jwara, chronic fever and chronic cough, breathing difficulties, and headache. It can be given with honey, tulsi svarasa, ghee, sugar.

Scientific Evidence of Swasari Gold:

Patanjali Research Foundation has done extensive research work on Swasari Gold Capsule. Pulmonary airway inflammation due to various causes in different animal models were studied in detail to assess the efficacy of Swasari Gold. Some of the major studies are:

A) Mouse model of steroid refractory, mixed granulocytic severe airway inflammation:

C57BL/6 mice were sensitized with an emulsion of House Dust Mite (HDM) in Complete Freund's Adjuvant (CFA). Fourteen days later they were challenged with house dust mite by intranasal route for four consecutive days. When compared to normal mice, house dust mite challenge in sensitized animals led to development of aryl hydrocarbon receptor (AHR) and the influx of inflammatory cells namely, eosinophils and neutrophils in the Bronchoalveolar lavage fluid (BALF). Additionally, inflammatory cell infiltration was also observed in the lungs as revealed by histopathology. Furthermore, the levels of Th2 and pro-inflammatory cytokines were also elevated in the Bronchoalveolar lavage fluid. High dose of dexamethasone was not efficacious in preventing the development of aryl hydrocarbon receptor and exhibited

reduced efficacy in inhibiting the eosinophil and neutrophil influx in the Bronchoalveolar lavage fluid. On the other hand, Swasari Gold administered by oral route inhibited all the disease phenotypes observed in the animal model. Thus, Swasari Gold holds a therapeutic potential in patients afflicted with steroid refractory mixed granulocytic asthma.

B) Bidi smoke extract-induced pulmonary inflammation

In this model, C57BL/6 mice were instilled bidi smoke extract intranasally for seven days. When compared to the normal mice, bidi smoke extract challenge resulted in the development of aryl hydrocarbon receptor and neutrophilia in Bronchoalveolar lavage fluid. Swasari Gold prevented the development of aryl hydrocarbon receptor and airway neutrophilia in mice. Consequently, Swasari Gold can be of potential use in the treatment of the continuous underlying airway inflammation observed in patients suffering with chronic obstructive pulmonary disease.

C) Exacerbation of bidi smoke-induced airway inflammation (Viral infection simulation)

C57BL/6 mice were challenged with bidi smoke extract for eleven consecutive days. In addition, mice were intranasally administered Polyinosinic:polycytidylic acid [Poly (I:C)] on days 0, 3, 7 and 11 to mimic viral infection. Polyinosinic:polycytidylic acid administration in bidi smoke extract-challenged animals resulted in aggravation of aryl hydrocarbon receptor, increased inflammatory cell influx in the Bronchoalveolar lavage fluid, which comprised of neutrophils and lymphocytes; and augmented inflammatory cell infiltration in the lungs, when compared with the disease phenotype observed after instillation of bidi smoke extract alone. Swasari Gold administered by oral route demonstrated efficacy in this model by inhibiting the exacerbated disease characteristics observed in the model. Hence, Swasari Gold holds promise in patients suffering from Chronic Obstructive Pulmonary Disease who develop heightened pulmonary inflammation and consequently lung damage subsequent to acquiring viral infection.

D) Exacerbation of bidi smoke-induced airway inflammation (Bacterial infection simulation)

In this study, C57BL/6 mice were administered bidi smoke extract, by intranasal route for twenty-eight successive days. Additionally, the animals were also challenged with lipopolysaccharide (LPS), on days 12 and 26. LPS was employed in this study to mimic bacterial infection. Lipopolysaccharide challenge in bidi smoke extract administered mice evoked worsening of aryl hydrocarbon receptor, augmented inflammatory cell influx in the Bronchoalveolar lavage fluid, which predominantly comprised of neutrophils; and increased inflammatory cell infiltration in the lungs, when compared with the disease phenotypes observed after subjecting the animals to bidi smoke extract challenge alone. Swasari Gold demonstrated in-vivo effectiveness in this model by inhibiting the disease characteristics observed in this model. The outcome of this in-vivo study suggests that Swasari Gold might be of therapeutic use in patients afflicted with Chronic Obstructive Pulmonary Disease subsequent to a bacterial infection.

Swasari Gold was characterized by Ultra High Performance Liquid Chromatography (UHPLC)

equipped with Photo Diode Array (PDA). In Swasari Gold, the different compounds were observed at 278 nm wavelength mainly gallic acid (7.36 minutes), protocatechuic acid (12.68 minutes), methyl gallate (18.27 minutes), coumarin (32.56 minutes), cinnamic acid (36.95 minutes), eugenol (44.13 minutes), 6-gingerol (47.33 minutes), piperine (49.41 minutes), and glabridin (52.44 minutes); at 250 nm wavelength mainly ellagic acid (26.47 minutes), and glycyrrhizin (43.28 minutes), as shown in Fig. 1. In the chromatograms, the blue line indicates the standard and pink line shows the test sample.

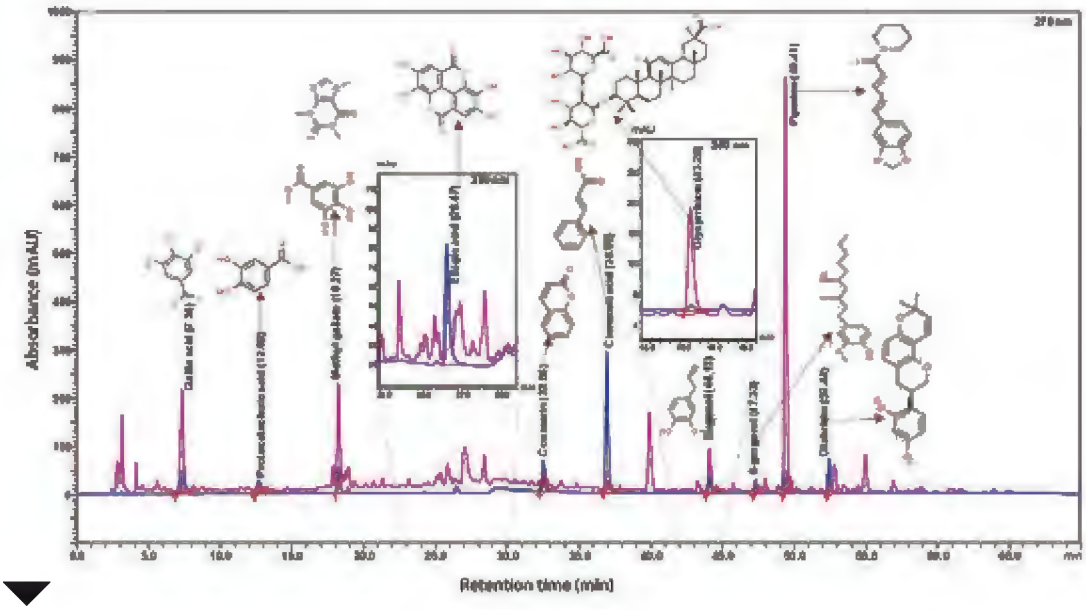


Fig. 1. Analysis of the Swasari Gold by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Swasari Gold, the compounds were found at 278 nm wavelength: gallic acid (7.36 minutes), protocatechuic acid (12.68 minutes), methyl gallate (18.27 minutes), coumarin (32.56 minutes), cinnamic acid (36.95 minutes), eugenol (44.13 minutes), 6-gingerol (47.33 minutes), piperine (49.41 minutes), and glabridin (52.44 minutes); ellagic acid (26.47 minutes), and glycyrrhizin (43.28 minutes) at 250 nm wavelength. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of Swasari Gold Capsule:

Dose and Frequency	2 Capsules, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

SWASARI VATI श्वासारि वटी

Introduction to Cough, Cold and Asthma:

Acute viral infections in the upper respiratory tract (URTIs) are highly prevalent, with adults experiencing two to five colds annually and children encountering seven to ten. Common cold symptoms include coughing, sore throat, a runny or congested nose, and sneezing. Due to the frequency of these symptoms, many individuals self-diagnose URTIs as either a common cold or influenza (flu), relying mainly on clinical diagnosis by healthcare professionals. Over 200 serologically distinct viral types contribute to these infections, with rhinoviruses being the primary cause. Transmission occurs through the air and close personal contact. To prevent the spread of colds, practice good hygiene by cleaning hands, avoiding close contact with individuals with respiratory infections, and adopting measures like covering your nose and mouth when sneezing or coughing, as well as refraining from touching your eyes, mouth, and nose with unwashed hands.

Asthma is a chronic lung disease that affects people of all ages. It is caused by inflammation and muscular stiffness around the airways, making breathing difficult. Symptoms include coughing, wheezing, shortness of breath, and chest tightness. These symptoms might be mild or severe, and they may appear and disappear over time. Although asthma is a severe disease, it is manageable with the right treatment. Untreated asthma can cause sleep disturbance, fatigue during the day, and difficulty focusing. Asthmatics and their families may miss school and work, generating financial difficulties for the family and society as a whole. Persons with asthma may require immediate medical attention and may be admitted to a hospital for treatment and monitoring if their symptoms are severe. In the most severe cases, asthma can be deadly. The symptoms of asthma might differ from individual to person. Symptoms might get much severe at times. This is referred to as an asthma attack. Symptoms are frequently worse at night or during activity.

Common asthma symptoms include: a persistent cough, especially at night; wheezing while exhaling and occasionally when inhaling; shortness of breath or trouble breathing; and chest tightness, which makes it difficult to breathe deeply. Some people experience worse symptoms when they get a cold or when the weather changes. Dust, smoke, fumes, grass and tree pollen, animal hair and feathers, harsh soaps and perfume are all potential triggers. Other disorders might also create symptoms. People experiencing symptoms should seek medical attention. Causes and Triggers: Asthma is a multifactorial condition influenced by genetic and environmental factors. While the

exact cause of asthma is not fully understood, several factors contribute to its development and progression. These include: Genetic predisposition: Certain genetic variations are associated with an increased risk of developing asthma. However, the development of asthma is thought to be influenced by a combination of genetic and environmental factors. Environmental allergens: Exposure to common allergens such as dust mites, pollen, mold, pet dander, and certain food allergens can trigger asthma symptoms in susceptible individuals. Respiratory infections: Viral respiratory infections, particularly during early childhood, have been linked to the development of asthma or the exacerbation of existing asthma. Occupational exposures: Occupational exposures to certain substances, such as chemicals, dust, or fumes, can contribute to the development of occupational asthma. Asthma management aims to control symptoms, reduce inflammation, prevent exacerbations, and improve overall lung function. Treatment options may include: Inhaler medications: Inhalers are the mainstay of asthma treatment and are available in two types: relievers (short-acting bronchodilators) used during acute symptoms for immediate relief, and preventers (inhaled corticosteroids) used on a regular basis to reduce airway inflammation and prevent symptoms. Oral medications: In some cases, oral medications such as leukotriene modifiers, long-acting bronchodilators, or systemic corticosteroids may be prescribed to manage symptoms and control inflammation. Allergen avoidance: Identifying and avoiding specific allergens that trigger asthma symptoms can help reduce the frequency and severity of episodes. This may involve implementing environmental control measures, such as using dust mite covers, maintaining good indoor air quality, and minimizing exposure to allergens. Education and self-management: Asthma education programs play a crucial role in empowering individuals to understand their condition, recognize triggers, and manage their symptoms effectively. This includes developing an asthma action plan, monitoring peak flow readings, and knowing when to seek medical assistance. Immunotherapy: For individuals with severe allergic asthma, allergen immunotherapy (allergy shots) may be considered to desensitize the immune system and reduce sensitivity to specific allergens.

Ingredients and Medicinal Uses of Swasari Vati:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Fine Powder of:				
Mulethi (Rt.)	*Glycyrrhiza glabra*	Kaph Nisarak, Balya	• Expectorant • Strengthening	64 mg
Kakdasingi (Gal.)	*Pistacia integerrima*	Kasa	• Alleviates cough	63 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Rudanti (Fr.)	*Cressa cretica*	Kasa, Svasa	• Alleviates cough • Alleviates asthma	63 mg
Sounth (Rz.)	*Zingiber offcinale*	Kasa, Svasa	• Alleviates cough • Alleviates asthma	42 mg
Marich (Fr.)	*Piper nigrum*	Kaphagna	• Pacifies kapha dosha	42 mg
Chhotipipal (Fr.)	*Piper longum*	Svasa, Kaph	• Alleviates asthma • Pacifies kapha dosha	42 mg
Lavang (Fl. Bd.)	*Syzygium aromaticum*	Kasa, Kaphagna	• Alleviates cough • Pacifies kapha dosha	32 mg
Dalchini (Bk.)	*Cinnamomum zeylanicum*	Sugandhit, Deepan, Pachan	• Gives fragrance • Improve digestion	32 mg
Akarkara (Rt.)	*Anacyclus pyrethrum*	Kasa, Svasa	• Alleviates cough • Alleviates asthma	32 mg
Abhrak Bhasma	Classical Product	Kasa, Svasa	• Alleviates cough • Alleviates asthma	12.571 mg
Mukta Shukti Bhasma	Classical Product	Kasa, Svasa	• Alleviates cough • Alleviates asthma	12.571 mg
Godanti Bhasma	Classical Product	Kasa, Svasa	• Alleviates cough • Alleviates asthma	12.571 mg
Kapardak Bhasma	Classical Product	Kasa, Svasa	• Alleviates cough • Alleviates asthma	12.571 mg
Praval Pisthi	Classical Product	Kasa	• Alleviates cough	12.571 mg
Sphatika Bhasma	Classical Product	Kasa, Svasa	• Alleviates cough • Alleviates asthma	12.571 mg
Tankan Bhasma	Classical Product	Kasa, Svasa	• Alleviates cough • Alleviates asthma	12.571 mg

Swasari Vati is Useful in:

- **Cough and Cold**
- **Asthma**

Swasari Vati: Description in Classical Texts:

Swasari Vati is an Ayurvedic proprietary medicine which contains the following drugs. Mulethi comes under Haritakyadi varga in bhavprakash nighantu. It is sweet in taste, and cold potency. Its properties heaviness and unctuousness and pacifies vata, pitta doshas. This drug is useful in vomiting, abscess, phthisis, diseases caused by vitiation of blood and is good for eye disease, and improves complexion.

Bhavaprakasha has included Kakdasingi under Hareetakyadi varga. This drug has been used traditionally in Ayurvedic medicine for a variety of conditions including Pyrexia, Phthisis and Respiratory diseases. It is Astringent and Bitter in tastes and hot in potency and pacifies kapha vata doshas. Rudanti has pungent and bitter tastes; light and dry qualities; hot potency and katu vipaka. It pacifies kapha and vata doshas and is digestive, improving taste, useful in treating breathing diseases.

Sonth comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste. Physical property is lightness and unctousness. This drug is hot in potency and pacifies vata, kapha doshas. It can cure vomiting, bronchitis, cardiac ailments, edema, tympanites, asthma,etc.

Marich comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste; light and sharp property, hot potency, katu vipaka; and pacifies vata, kapha doshas. It is useful cough. Chhotipipal comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste. Physical property is lightness and unctuousness and sharpness. This drug is hot in potency and pacifies vata and kapha doshas. It can cure fever, indigestion, cough and asthma.

Lavang has bitter and pungent tastes; qualities of lightness and unctuousness with cold potency and katu vipaka and pacifies kapha and pitta doshas. Tulsi is pungent, bitter in taste, and hot potency. It has dry property and pacifies vata and kapha doshas although also aggravates pitta dosha. Useful in skin diseases, dysuria, burning sensation, disease caused by vitiation of blood.

Twak/dalchini has been mentioned under Bhava Prakasha- Karpooradi varga. This drug is light in quality, has hot potency, pungent, sweet and bitter tastes. The drug is Ruksha guna (dry in quality). It increases pitta and reduces kaphavata. It reduces itching, anorexia, diseases of heart and kidney/bladder and vatarogas. Akarakara is having pungent taste with dry and sharp qualities with hot potency. This drug pacifies kapha and vata doshas.

Abhrak Bhasma can cure indigestion, kapha roga, breathing difficulties, fever, rakta pitta, cough, diabetes, anemia, and can be given with honey, ghee, Triphala kwath, Guduchi svarasa, Ardraka svarasa.

Mukta Shukti Bhasma can cure Diabetes, Tuberculosis, and Leucorrhoea. It can be given with honey, lemon juice. Godanti Bhasma can act in indigestion, headache, chronic fever, cough. It can be given with honey, ghee, sugar, Tulsi svarasa. Kapardak Bhasma pungent taste, dryness and sharpness, katu vipaka, hot potency, kapha and pitta doshas.

Praval Pisthi has sweet, sour and astringent tastes; qualities of lightness and unctuousness with madhura vipaka and cold potency. Sphatika Bhasma has astringent and sour taste and pacify all three doshas. Tankan Bhasma pungent taste with hot potency. It has an ability to expel out excess kapha dosha and is useful in cough and cold and other respiratory illnesses.

Scientific Evidence of Swasari Vati:

Patanjali Research Foundation has conducted a deep research to study the efficacy and constituent of Swasari Vati whose mail componenet is Divya Swasari Ras (DSR). High Performance Liquid Chromatography (HPLC) study confirms that Divya Swasari Ras (DSR) contains cinnamic acid, eugenol, 6- gingerol, piperine, glycyrrhizin, gallic acid and ellagic acid, as shown in Fig. 1. Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) analysis confirm the presence of Calcium in herbal formulation. In the The level of Calcium present was obtained to be about 4.60 %.

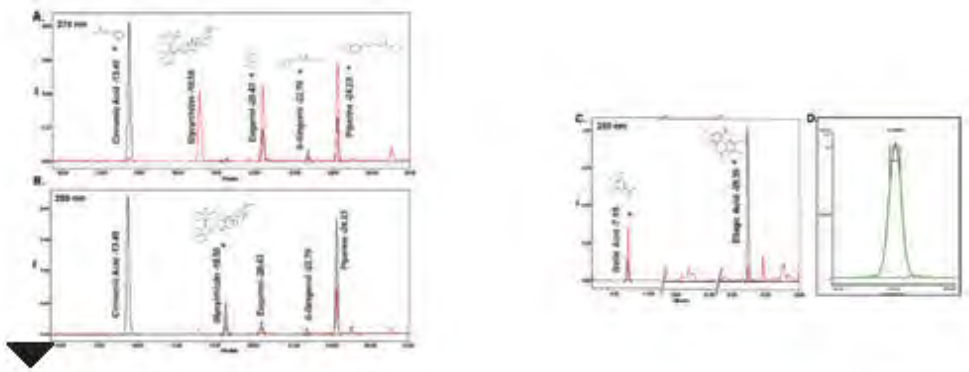


Fig. 1. Compound analysis of Divya Swasari Ras (DSR) by using HPLC and ICP-OES. HPLC analysis confirms the presence of bioactive compounds Glycyrrhizin, Gallic acid and Ellagic acid at 250 nm wavelength, Cinnamic acid, Eugenol, 6-Gingerol and Piperine at 278 nm wavelength in the SV. ICP-OES analysis confirms the presence of calcium in SV.

The Divya Swasari Ras (DSR) showed anti-asthmatic and anti-inflammatory properties. Activation of immune cells and infiltration into lungs is the symbol of allergic airway inflammation and a measurement of its severity. In order to assess the therapeutic benefit of SV on inflammatory cell infiltration, we evaluated the number of inflammatory cells, including eosinophils, neutrophils, macrophages, and lymphocytes, in bronchoalveolar lavage fluid (BALF).

Total number of inflammatory cells were considerably increased in chronic ovalbumin (OVA) challenged Disease Control (DC) mice, compared to Normal Control (NC) ($p < 0.05$). Oral treatment of mice with low dose (135 mg/kg), medium dose (400 mg/kg) and high dose (1200 mg/kg) of SV significantly reduced the number of inflammatory cells present in BALF ($p < 0.05$). Further, Dexamethasone (DEXA) treated mice also had significantly fewer inflammatory cells ($p < 0.05$) than DC, as shown in the Fig. 2A. Differential count analysis of inflammatory cells recognized that OVA-induced a significant influx of Lymphocytes (Fig. 2B) and Eosinophils (Fig. 2C). Interestingly, while a significant decrease in macrophage percentage (49% vs 32%, $p < 0.005$) (Fig. 2D) was noticed upon chronic OVA-challenge in DC, non-significant changes in neutrophil percentage was identified (Fig. 2E). Treatment with Dexamethasone (DEXA) significantly decreased the OVA-induced lymphocyte and eosinophil percentage (Fig. 2B and 2C). These results showed the therapeutic benefit of SV in inhibiting OVA-induced infiltration of inflammatory cells, as shown in Fig. 2.

Goblet cell hyperplasia, peri-bronchial collagen deposition and airway wall thickening represents the symbols of pathological changes in asthma, and are commonly used to examine the severity of airway remodelling. To examine mucus hypersecretion by bronchial airways, lung sections were stained with Periodic Acid–Schiff (PAS) stain (Fig. 3A) and quantified in a double blind manner by using a numerical scoring system (Fig. 3B). Compared to NC, OVA-challenge significantly increased mucus hypersecretion and goblet cell hyperplasia in the airways ($p < 0.05$). Further, OVA induced moderately severe mucus hyper secretion was significantly alleviated in a dose dependent manner in SV treated mice (vs. DC, $p < 0.05$) and in DEXA treated mice (vs. DC, $p < 0.05$). To evaluate peri-bronchial collagen deposition and airway wall thickening, Masson's trichrome staining was performed and evaluated. As shown in Fig. 4A, collagen deposition and airway wall thickness were significantly increased in the OVA treated DC (vs. NC, $p < 0.05$). Compared with the DC, SV treatment slightly alleviated collagen deposition and airway wall thickening. Whereas, DEXA treatment significantly inhibited collagen deposition (vs. DC, $p < 0.05$) (Fig. 4B).

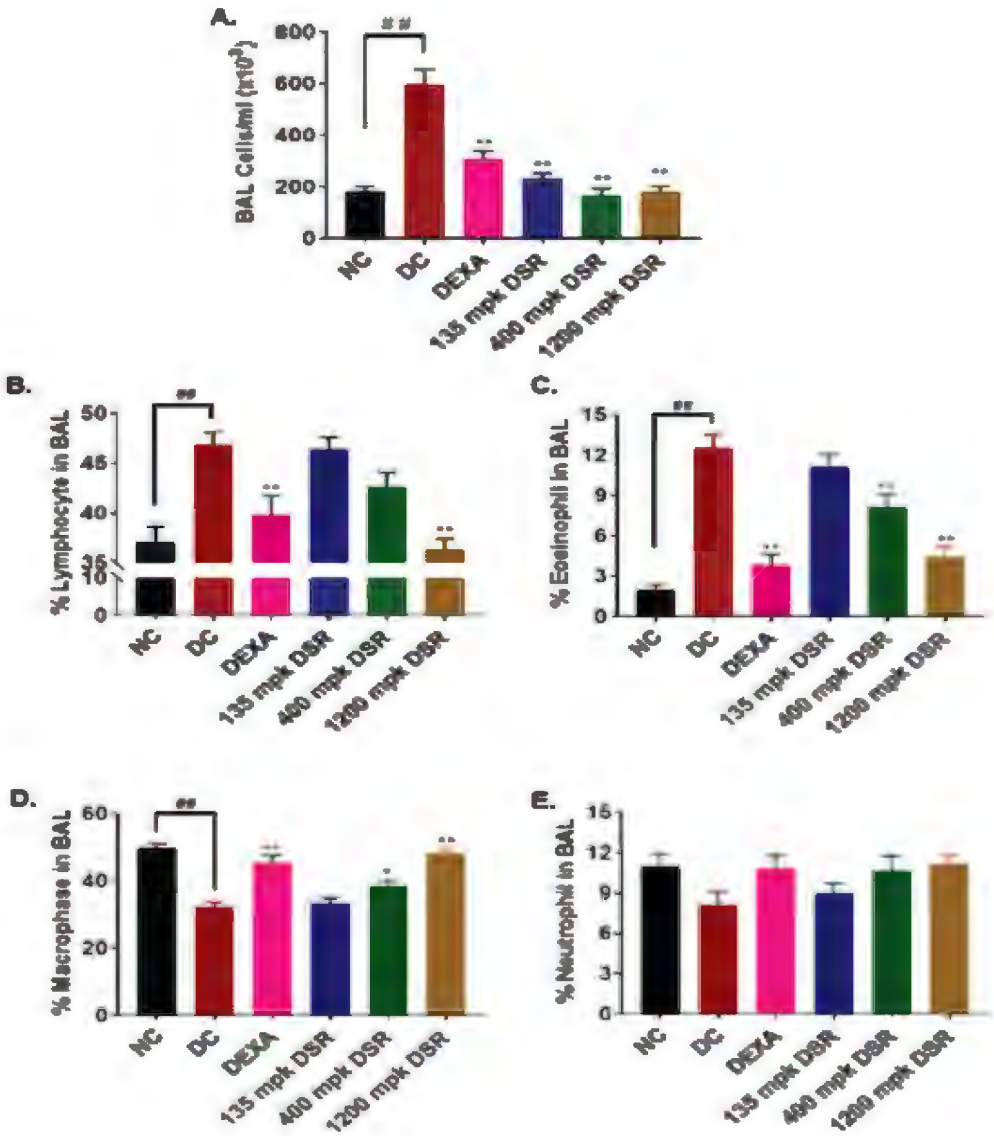


Fig. 2. Divya Swasari Ras (DSR) reduces inflammatory cell accumulation in the BALF in OVA-induced allergic lung inflammation. BALF was collected at 48 h after the last OVA challenge to measure the A) Total cell count in BALF, B) % Lymphocytes, C) % Eosinophils, D) % Macrophages E) % Neutrophils.

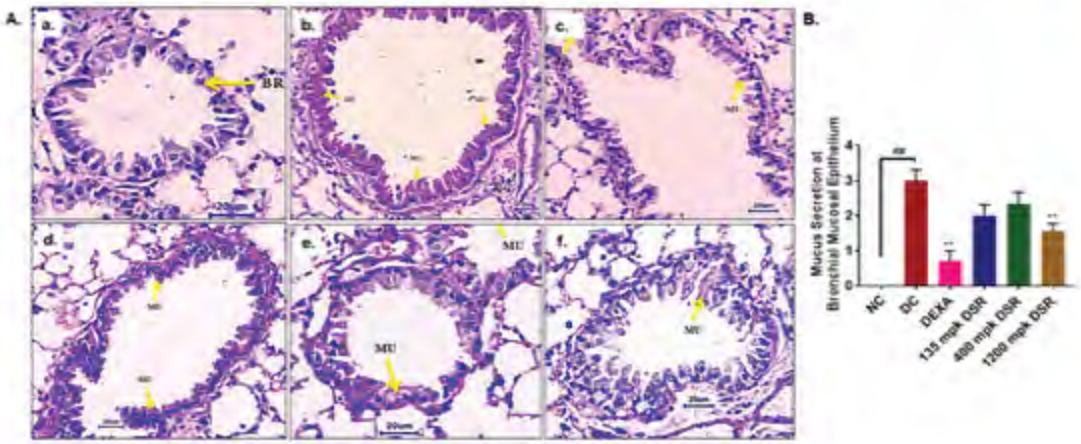


Fig. 3. Divya Swasari Ras (DSR) suppresses mucus accumulation in asthmatic mice. Compared to NC, DC showed mucus accumulation and SV treatment significantly alleviated mucus accumulation. A) NC B) DC C) DEXA D) 135 mg/kg SV E) 400 mg/kg SV F) 1200 mg/kg SV. E) Quantification mucus accumulation at bronchial mucosal epithelium. Arrow indicates mucus accumulation in airways. Data are present the means ± S.E.M (n ≥ 5). **, ##, p < 0.005 by one-way ANOVA.; ## Represents significant compared to NC and ** Represents significant compared to DC. (40X magnification).

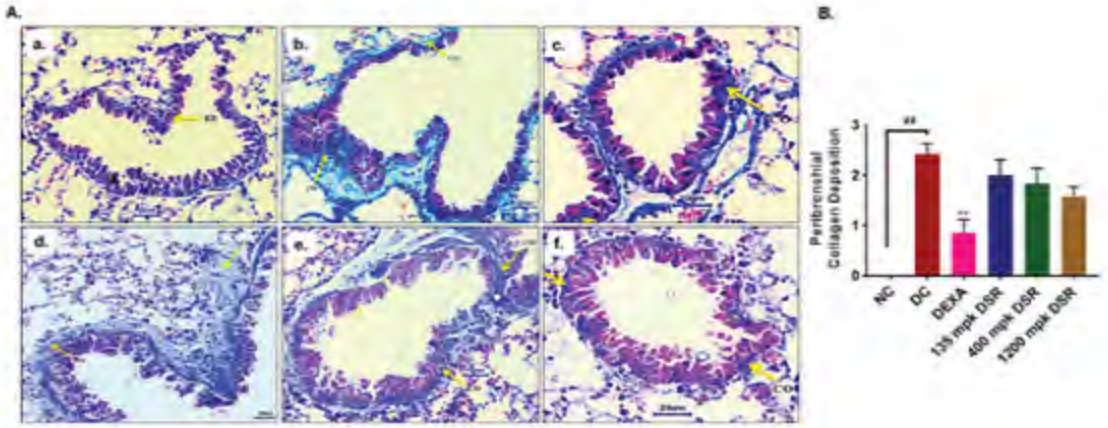


Fig. 4. Divya Swasari Ras (DSR) suppresses collagen deposition in asthmatic mice. Compared to NC, DC showed collage deposition around airways and SV treatment significantly alleviated collagen deposition. A) NC B) DC C) DEXA D) 135 mg/kg SV E) 400 mg/kg SV F) 1200 mg/kg SV. E) Quantification peri-bronchial collagen deposition. Arrow indicates collagen deposition. Data are present the means ± S.E.M (n ≥ 5). **, ##, p < 0.005 by one-way ANOVA.; ## Represents significant compared to NC and ** Represents significant compared to DC. (40X magnification).

Activation of Th2 cells and production of Th2 cytokine (IL-4, IL-5 and IL-13) and Th2 oriented cytokines (IL-6, IL-33) contribute significantly to the pathophysiology and lung dysfunction in allergic Asthma. Steady state mRNA expression analysis of whole lung identified the expression of Th2 related (IL-4, IL-5 and IL-33) and Th1 cytokine (IFN-γ), as shown in Fig.5. Remarkably, treatment with high dose of SV of OVA-sensitized & challenged mice appeared to reduce the expression of IL-4, IL-33 and IFN-γ to even below that of non-sensitized NC mice. At its highest dose (1200 mg/kg), SV significantly attenuated the expression of IL-4 (DC, 3.3 fold vs. 0.7 fold, SV, $p < 0.05$), IL-5 (DC, 2.7 fold vs. 0.9 fold, SV, $p < 0.05$), IL-33 (DC, 3.6 fold vs. 0.8 fold, SV, $p < 0.05$) and IFNγ (DC, 2.1 fold vs. 0.5 fold, SV, $p < 0.05$), IL-6 (DC, 3.9 fold vs. 0.9 fold, SV, $p < 0.05$), IL-1β (DC, 16.1 fold vs. 1.5 fold, SV, $p < 0.05$) (Fig. 5A–D).

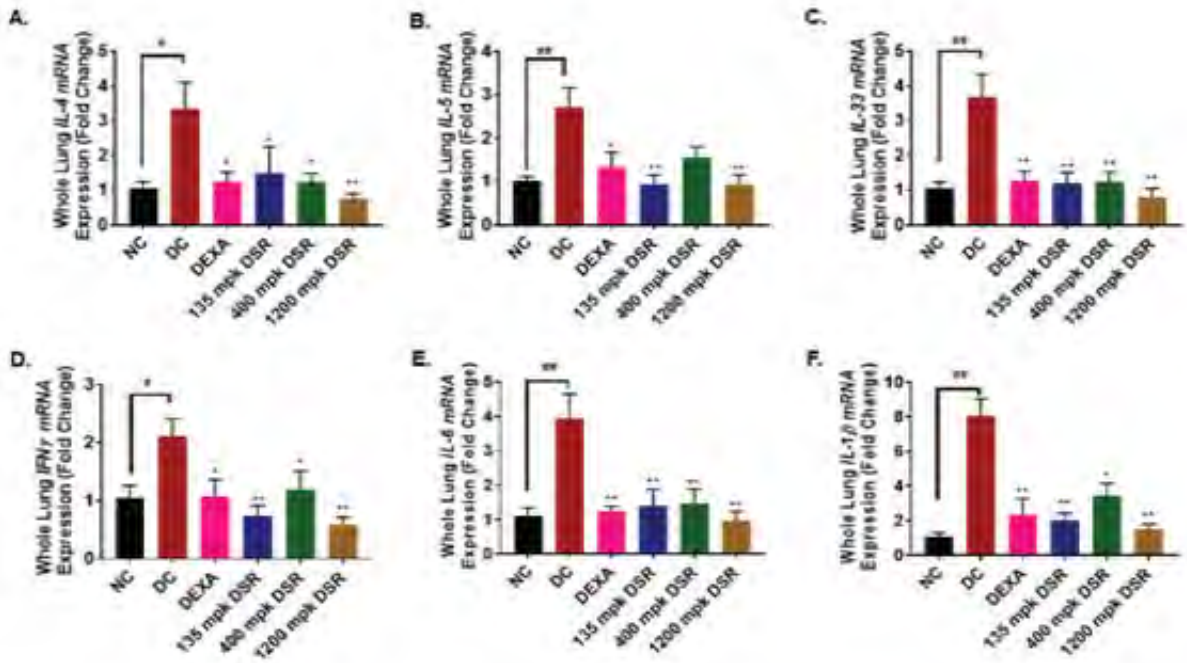


Fig. 5. SV reduces the mRNA expression of pro-inflammatory cytokines in whole lung tissue. Whole lung tissue RNA was analysed for the steady state mRNA expression levels of cytokines A) IL-4, B) IL-5 C) IL-33 D) IFN-γE) IL-6 and F) IL-1β. Data are present the means ± S.E.M ($n \geq 5$). **, ##, $p < 0.005$ and * $p < 0.05$ by one-way ANOVA.; ## Represents significant compared to NC and ** Represents significant compared to DC.

Antioxidants show a very important role in defence mechanisms of the cells against oxidative stress. Suppressed activity of key antioxidant enzymes had been found to be associated with bronchial asthma and the oxidant/antioxidant imbalance is believed to be a key event in asthma. To test the role of oxidative stress and subsequent protective effect of SV, lung homogenates were tested for key antioxidant biochemical markers. From the analysis it is evident that compared to NC, OVA-sensitization and challenge in DC significantly altered various oxidant/antioxidant parameters. However, treatment with SV or DEXA reversed OVA-induced alterations (Fig. 6). Superoxide dismutase (SOD) plays an important role in scavenging superoxide radicals during oxidative stress. OVA induced allergic asthma in DC, decreased the activity of antioxidant enzymes, SOD (2.3 U/mg vs. 1.0 U/mg, $p < 0.05$). Whereas, treatment with SV, significantly restored the activity (vs. DC, all $p < 0.05$), similar to DEXA (vs. DC, $p < 0.05$) (Fig. 6A)

Catalase enzyme detoxifies H_2O_2 produced under physiological conditions by the action of superoxide dismutase. Compared to NC, allergic asthma in DC decreased the activity of catalase (84.8 U/mg vs. 30.3 U/mg, $p < 0.05$). Conversely, either treatment with DEXA (vs. DC, $p < 0.05$) or SV significantly restored the catalase activity at medium and high dose ($p < 0.05$) (Fig. 6B). GPx enzyme, reduces the organic peroxide H_2O_2, and prevents the peroxidation of cell membrane lipids and subsequent instability. In DC, the levels of GPX were significantly decreased (1.1 U/mg vs. 0.3 U/mg, $p < 0.05$) compared to NC. Treatment with DEXA (vs. DC, $p < 0.05$) or SV partially restored the activity of GPX (Fig. 6C).

Malondialdehyde (MDA), the major end product of lipid peroxidation and indicator of damage to membrane lipids was significantly elevated DC (1.4 µM/mg vs. 4.5 µM/mg, $p < 0.05$). DEXA ($p < 0.05$) or SV significantly decreased the OVA induced of MDA levels (vs. DC, 2.5 µM/mg-3.0 µM/mg, all $p < 0.05$) (Fig. 6D).

Glutathione (GSH), is an abundant airway antioxidant. Upon oxidation, it is converted to GSSG. The ratio of GSH/GSSG is an indicator of cellular redox homeostasis. Compared to NC, in DC, the levels of GSH were significantly decreased (62.7 µM/mg vs. 32.0 µM/mg, $p < 0.05$) (Fig. 6E) and the levels of GSSG were elevated (11.2 µM/mg vs. 22.3 µM/mg, $p < 0.05$) (Fig. 7F) hence decreasing the GSH/GSSG ratio (4.8 vs. 1.5, $p < 0.05$) in DC (Fig. 6G). The studied inflammation markers are associated positively with MDA levels and negatively with the antioxidant markers (SOD, CAT, GPX and GSH).

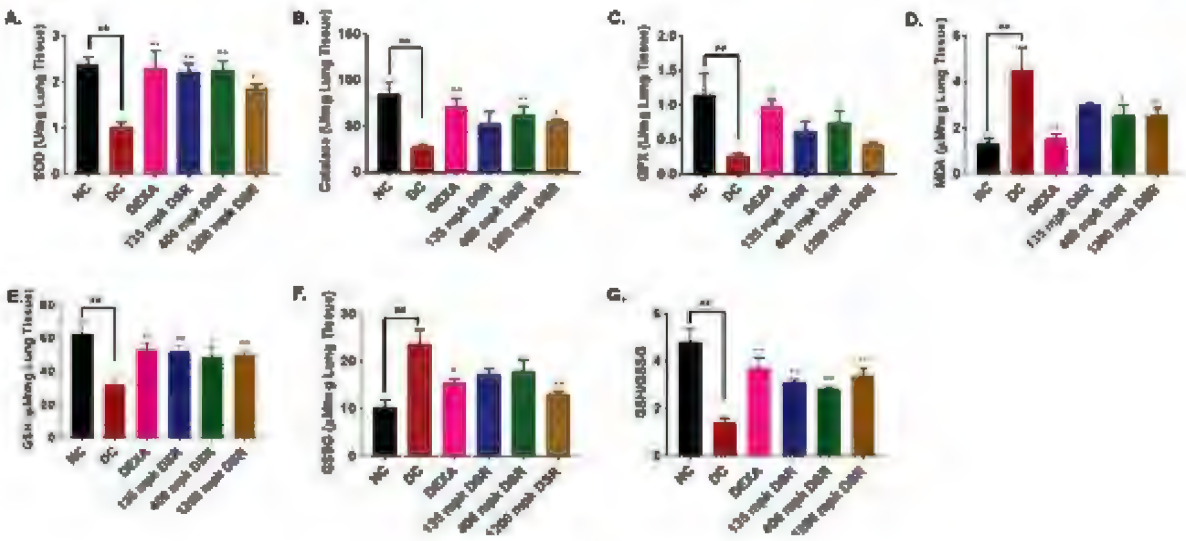


Fig. 6. SV modulates the antioxidant biochemical markers in allergic asthma model. Whole lung protein was isolated and analysed for various biochemical parameters related to oxidative stress. A) SOD activity B) Catalase C) GPX D) MDA E) GSH F) GSSG G) GSH/GSSG ratio. Activity was expressed as either U/ mg lung tissue or µM/mg lung tissue. Data are present the means ± S.E.M (n ≥ 5). **, ##, p < 0.005 and * p < 0.05 by one-way ANOVA.; ## Represents significant compared to NC and ** Represents significant compared to DC

Dose and Method of Use of Swasari Vati:

Dose and Frequency	2-6 Tablets, twice a day
Adjuvant	Luke warm water and Milk
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

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Tablet

BRONCHOM ब्रोंकोम

Introduction to Respiratory Illness:

Respiratory system is the crucial organ system that ensures proper oxygen levels in the body. Various factors can influence this system and cause respiratory illnesses like asthma, upper respiratory tract virus infections and bronchitis.

Asthma is a chronic lung disease that affects people of all ages. It is caused by inflammation and muscular stiffness around the airways, which makes breathing difficult. Coughing, wheezing, shortness of breath, and chest tightness are some of the symptoms. These symptoms might be moderate or severe, and they can appear and disappear over time. Although asthma may be a serious illness, it is treatable with the appropriate medication. People with untreated asthma may have sleep disruption, fatigue during the day, and impaired focus. Asthmatics and their families may miss school and work, causing financial hardship for the family and the larger society. If symptoms are severe, persons with asthma may require emergency medical attention and may be admitted to a hospital for treatment and monitoring. Asthma can be fatal in the most severe instances. Asthma symptoms can vary from person to person. Symptoms get sometimes significantly worse. This condition is known as an asthma attack. During night or exercise symptoms are often worse. Common symptoms of asthma include: a persistent cough, especially at night wheezing when exhaling and sometimes when inhaling shortness of breath or difficulty breathing, sometimes even when resting chest tightness, making it difficult to breathe deeply. Some people will have worse symptoms when they have a cold or during changes in the weather. Other triggers can include dust, smoke, fumes, grass and tree pollen, animal fur and feathers, strong soaps and perfume.

Frequent occurrences of acute viral infections in the upper respiratory tract (URTIs) are common, with adults averaging two to five colds annually and children experiencing seven to ten. Symptoms such as coughing, sore throat, runny or congested nose, and sneezing often lead individuals to self-diagnose URTIs as either a common cold or influenza (flu). Healthcare professionals play a crucial role in clinical diagnosis. Over 200 serologically distinct viral types, primarily rhinoviruses, contribute to these infections. Transmission happens through the air and close personal contact. To prevent the spread of colds, practicing good hygiene, avoiding close contact with those with respiratory infections, and adopting measures like covering your nose and mouth when sneezing or coughing are essential. Additionally, refraining from touching your eyes, mouth, and nose with unwashed hands contributes to preventive efforts.

Bronchitis is a medical condition that occurs

when the airways in the lungs, which are called bronchial tubes, become inflamed and produce coughing, typically with mucus production. Bronchitis can be acute (short-term) or chronic (long-term). Acute bronchitis, which is quite common, is generally caused by an infection and can be contagious. Most people recover within a few days or weeks. Chronic bronchitis is a type of chronic obstructive pulmonary disease (COPD), which is a collection of lung illnesses that make breathing difficult and worsen with time.

Chronic bronchitis is characterized by bronchial tube inflammation (swelling) and irritation. These are the airways that transport air to and from lungs' air sacs. Mucus accumulates as a result of the irritation of the tubes. The mucus and thickening of the tubes make it more difficult for the lungs to transport oxygen into and carbon dioxide out of the body.

Ingredients and Medicinal Uses of Bronchom:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Lavang (Fl. Bd.)	*Syzygium aromaticum*	Swasa Kasa Har, Shulaghna	• Cures Breathing difficulties • Cough and Pain	10 mg
Tulsi (Lf.)	*Ocimum sanctum*	Kasa, Swasa, Visham Jwara Har, Pratishyay	• Cures Breathing difficulties • Cough and Rhinitis • Fever	20 mg
Dalchini (Bk.)	*Cinnamomum zeylanicum*	Kasa -Peenas Har	• Cures Cough	10 mg
Sonth (Rz.)	*Zingiber officinale*	Swasa Kasa, Pratishyay Har	• Cures Breathing difficulties • Cough • Rhinitis	10 mg
Tejpatra (Lf.)	*Cinnamomum tamala*	Kasa Har	• Cures Cough	10 mg
Safed vasa (Lf.)	*Ashatoda vasica*	Swasa-Kasa Har, Kaph Nissarak	• Cures Breathing difficulties • Cough • Anti-Tussive	20 mg
Banafsa (Fl.)	*Viola odorata*	Kapha Nissarak	• Anti-Tussive	20 mg
Bharangi (Rt. Bk)	*Clerodendrum serratum*	Swasa Har	• Cures Breathing difficulties	10 mg
Mulethi (Rt.)	*Glycyrrhiza glabra*	Kanthya, Kasa Har	• Cures Cough	40 mg
Amaltas (Fr. Pp.)	*Cassia fistula*	Jwaraghna	• Cures Fever	10 mg
Chhoti pipal (Fr.)	*Piper longum*	Swasa-Kasa Har	• Cures Cough and Breathing difficulties	10 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Kala vasa (Lf.)	*Justicia gendarussa*	Kasa Har, Kapha Nissarak	• Cures Cough • Anti-Tussive	20 mg
Lisoda (Fr.)	*Cordia dichotoma*	Kapha Nissarak	• Anti-Tussive	10 mg
Chhoti Kateri (Wl.Pt.)	*Salanum xanthocarpum*	Jawar Har, Swasa-Kasa Har	• Cures Fever • Cough and breathing difficulties	40 mg
Dhatura (Lf.)	*Datura stramnium*	Swasa Har	• Cures breathing difficulties	10 mg
Fine Powder of:				
Mulethi (Rt.)	*Glycyrrhiza glabra*	Kanthya, Kasa Har	• Cures Cough • Good for throat	32 mg
Lavang (Fr.Bd.)	*Syzgium aromaticum*	Swas-Kasa Har	• Cures Cough and breathing difficulties	16 mg
Dalchini (Bk.)	*Cinnamomum verum*	Kas-Har, Peenas Har	• Cures Cough • rhinitis	16 mg
Karkatashringi (Ga.)	*Pistacia integerrima*	Kapha Nissarak, Kasaghna	• Anti-Tussive • Cures Cough	32 mg
Rudanti (Fr.)	*Cressa cretica*	Swasa Har	• Cures Cough and breathing difficulties	32 mg
Sonth (Rz.)	*Zingiber officinale*	Swas, Kasa-Pratishyay Har	• Cures Cough and breathing difficulties • Rhinitis.	21 mg
Chhoti Pippali (Fr.)	*Piper longum*	Jeerna Jwar Har, Swasa-Kasa Har	• Cures Cough and breathing difficulties	21 mg
Marich (Fr.)	*Piper nigrum*	Swasa Har, Shulaghna	• Cures Cough • Pain	21 mg
Akarakara (Rt.)	*Anacyclus pyrethrum*	Pratishyay, Shoth-Kasa Har	• Cures Rhinitis • Cough and Swellling	15 mg
Abhrak Bhasma	Classical Preparation	Jirn Jwara Har, Kasaghna	• Cures Chronic Fever and Cough	11 mg
Mukta Shukti Bhasma	Classical Preparation	Jirn Jwara Har, Shulaghna	• Cures Chronic Fever and Pain	11 mg
Kaparda Bhasma	Classical Preparation	Trishna Nashak, Jwara Nashak	• Cures Excessive Thirst • Fever	11 mg
Godanti Bhasma	Classical Preparation	Jwara, Kasa, Swasa Har	• Cures Fever • Cough and breathing difficulties	11 mg

Bronchom is Useful in:

- **Asthma**
- **Bronchitis**
- **Cough and Cold**

Bronchom: Description in Classical Texts:

Bronchom is an efficient Ayurvedic proprietary medicine prepared by using Lavang which has bitter and pungent tastes; qualities of lightness and unctuousness with cold potency and katu vipaka and pacifies kapha and pitta doshas. Tulsi is pungent, bitter in taste, and hot potency. It has dry property and pacifies vata and kapha doshas although also aggravates pitta dosha. Useful in skin diseases, dysuria, burning sensation, disease caused by vitiation of blood.

Dalchini comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, bitter and pungent in taste, and cold potency It has light and dry property and has katu vipaak. This drug pacifies vata, pitta doshas and is useful in dryness of mouth and thirst.

Sonth comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste. Physical property is lightness and unctousness. This drug is hot in potency and pacifies vata, kapha doshas. It can cure vomiting, bronchitis, cardiac ailments, edema, tympanites, asthma,etc.

Tejpatra comes under Haritakyadi varga in bhavprakash nighantu. It is sweet in taste, and hot potency. It has dryness, sharpness and sliminess properties; and pacifies vata, kapha doshas. Useful in anorexia and rhinitis.

Mentioned under Guduchyadi varga in Bhava prakasha, vasa is bitter and pungent; lightness and dryness are observed; has katu vipaka and cold potency. It pacifies kapha and pitta doshas and is good in cough and cold.

Banafsa has punget and bittr tastes with the qualities of lightness and unctuousness with katu vipaka and pacifying vata and pitta doshas.

Bharangi comes under Haritakyadi varga in bhavprakash nighantu. It is pungent, bitter and astringent in taste. Physical property is lightness and Dryness. This drug is hot in potency and pacifies vata dosha. It can cure fever, indigestion, thirst, polyuria, cough, asthma, hemorrhoids.

Mulethi comes under Haritakyadi varga in bhavprakash nighantu. It is sweet in taste, and cold potency. Its properties heaviness and unctuousness and pacifies vata, pitta doshas. This drug is useful in vomiting, abscess, phthisis, diseases caused by vitiation of blood and is good for eye disease, and improves complexion.

Amaltas comes under Haritakyadi varga in bhavprakash nighantu.. It is sweet in taste. Physical property is heaviness. This drug is cold in potency. It pacifies pitta and kapha doshas and is used in management of fever, epistaxis, indigestion, thirst, polyuria, cough, asthma. Chhoti Pippali comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste. Physical property is lightness and unctuousness and sharpness. This drug is hot in potency and pacifies vata and kapha doshas. It can cure fever, indigestion, cough and asthma.

Kala Vasa is bitter, pungent and hot, lukewarm and laxative and is beneficial in relieving fever, sputum disease and diseases like facial paralysis.

Lisoda comes under Amraadiphala varga in bhavprakash nighantu. It is sweet, bitter and astringent in taste; pacifies pitta and kapha doshas and may have an effect in hair diseases, poisoning, eruptions, skin diseases and erysipelas.

Chhoti Kateri comes under Guduchyadi varga in bhavprakash nighantu. It is pungent, bitter in taste. Physical property is lightness and dryness. This drug is hot in potency and pacifies vata dosha. It can cure fever, indigestion, cough, asthma, coryza, heart ailments.

Dhatura comes under Guduchyadi varga in bhavprakash nighantu. It is sweet, bitter and astringent in taste. The physical property is heaviness and sharpness. This drug is cold in potency and pacifies kapha, but aggravates vata.

Karkatashringi comes under Haritakyadi varga in bhavprakash nighantu. It is pungent and astringent in taste, and hot potency; and pacifies vata, kapha doshas. It is useful in vomiting, anorexia, flatulence, asthma, cough.

Rudanti has pungent and bitter tastes; light and dry qualities; hot potency and katu vipaka.

It pacifies kapha and vata doshas and is digestive, improving taste, useful in treating breathing diseases.

Marich comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste; light and sharp property, hot potency, katu vipaka; and pacifies vata, kapha doshas. It is useful cough.

Akarakara is having pungent taste with dry and sharp qualities with hot potency. This drug pacifies kapha and vata doshas.

Abhrak Bhasma can cure indigestion, kapha roga, breathing difficulties, fever, rakta pitta, cough, diabetes, anemia, and can be given with honey, ghee, Triphala kwath, Guduchi svarasa, Ardraka svarasa

Mukta Shukti Bhasma can cure Diabetes, Tuberculoisis, Leucorrhoea. It can be given with honey, lemon juice.

Kaparda Bhasma can cure indigestion, Tuberculosis, fever, rakta pitta, cough, diabetes, anemia, spleenomegaly, stomach related problems, poisoning. It can be given with Vasa svarasa, Nimbu svarasa, Trikatu Kashaya, Udumbara rasa.

Godanti Bhasma can act in indigestion, headache, chronic fever, cough. It can be given with honey, ghee, sugar, Tulsi svarasa.

Scientific Evidence of Bronchom:

Patanjali Research Foundation has conducted a detailed study on Bronchom on several in-vivo models.

A) Mouse model of chronic asthma:

In the animal model of chronic asthma, BALB/c mice were administered House Dust Mite (HDM) extract five times a week for five consecutive weeks by intranasal route. This led to development of all characteristic features clinically associated with chronic asthma namely increased airway hyperresponsiveness (AHR) to agents eliciting contraction of lungs; influx of eosinophils and lymphocytes in the bronchoalveolar lavage fluid (BALF); airway remodeling characteristics like infiltration of inflammatory cells in the lungs, fibrosis in sub-epithelial region, appearance of mucus secreting goblet cells; and increased airway smooth muscle mass. Additionally, the levels of Th2 cytokines and chemokines were also elevated in BALF of diseased mice. Further, the oxidative and nitrosative stress markers were also found to be increased in asthmatic mice. Bronchom, administered by oral route decreased all the above disease phenotypes associated with chronic asthma in a dose-dependent manner. Consequently, Bronchom is a prospective candidate for therapeutic use in humans afflicted with chronic asthma.

B) Mouse model of steroid refractory, mixed granulocytic severe airway inflammation:

Based on the encouraging results obtained in the chronic asthma study, the in-vivo effectiveness of Bronchom was evaluated in mouse model of HDM and complete Freund's adjuvant (CFA)-induced mixed granulocytic asthma. In this model, C57BL/6 mice previously sensitized to an emulsion of HDM and CFA were challenged with HDM by intranasal route for four consecutive days. When compared to normal animals, HDM challenge in diseased mice evoked AHR and the influx of both eosinophils as well as neutrophils in the BALF. Further, histopathological analysis of lungs revealed inflammatory cell infiltration as well as appearance of goblet cells. Additionally, the levels of Th2 and pro-inflammatory cytokines were also elevated. A peculiar finding of this study was that even a high dose of the steroid, dexamethasone when administered by oral route was not efficacious in preventing the development of AHR and reducing the number of goblet cells. It also

demonstrated reduced efficacy in inhibiting the eosinophil and neutrophil influx in the BALF. On the contrary, Bronchom administered by oral route significantly and dose-dependently inhibited the HDM and CFA-induced functional, cytological, histopathological and biochemical alterations. Thus, in addition to chronic asthma, Bronchom can be of potential therapeutic value in patients suffering from mixed granulocytic asthma.

C) Bidi smoke extract-induced pulmonary inflammation

Bronchom has also been evaluated for its in-vivo efficacy in mouse model of bidi smoke-induced pulmonary inflammation. In this model, C57BL/6 mice were administered bidi smoke extract by intranasal route for seven consecutive days, which resulted in development of AHR and neutrophilia in BALF, when compared to normal mice. Bronchom significantly protected the mice from the development of AHR and airway neutrophilia. Since Bronchom inhibited airway neutrophilia, it can be of potential use in treating the underlying airway inflammation associated with chronic obstructive pulmonary disease.

D) Exacerbation of bidi smoke-induced airway inflammation (Viral infection simulation)

In this model, C57BL/6 mice were subjected to intranasal instillation of bidi smoke extract for eleven consecutive days. Additionally, mice were intranasally administered Polyinosinic:polycytidylic acid [Poly (I:C)], which is a Toll Like Receptor (TLR)-3 ligand, with an objective to simulate viral infection, on days 0, 3, 7 and 11. This disease induction protocol elicited worsening of AHR, increased inflammatory cell influx in the BALF and augmented inflammatory cell infiltration in the lungs, when compared with the disease phenotype observed after instillation of bidi smoke extract alone. An additional finding of the study was that lymphocytes also appeared in the BALF along with neutrophils. Bronchom administered by oral route was effective in inhibiting the worsened disease characteristics observed in the model, thereby demonstrating its potential to be used in patients afflicted COPD who develop excessive pulmonary inflammation subsequent to viral infection.

E) Exacerbation of bidi smoke-induced airway inflammation (Bacterial infection simulation)

C57BL/6 mice were instilled bidi smoke extract, intranasally for twenty-eight consecutive days. In addition, the mice were challenged with lipopolysaccharide (LPS), a gram negative bacterial cell wall component on days 12 and 26. LPS is a TLR-4 ligand and was utilized to mimic bacterial infection in the model. Combined administration of bidi smoke extract along with LPS led to exacerbation of AHR, increased inflammatory cell influx in the BALF and increased inflammatory cell infiltration in the lungs, when compared with the disease features observed after subjecting the animals to bidi smoke extract challenge alone. Bronchom demonstrated in-vivo efficacy by inhibiting the disease phenotypes characteristic of this model. Consequently, Bronchom holds a therapeutic potential to be used in patients suffering with COPD who present with heightened pulmonary inflammation subsequent to bacterial infection.

The phytochemical investigation of Bronchom

was conducted using Ultra High Performance Liquid Chromatograph (UHPLC) equipped with Photo Diode Array Detector (PDA). Study confirms the presence of gallic acid, protocatechuic acid, methyl gallate, rosmarinic acid, glycyrrhizin, eugenol, piperine, and 6 gingerol on comparing it with reference standard as shown in fig. 1.

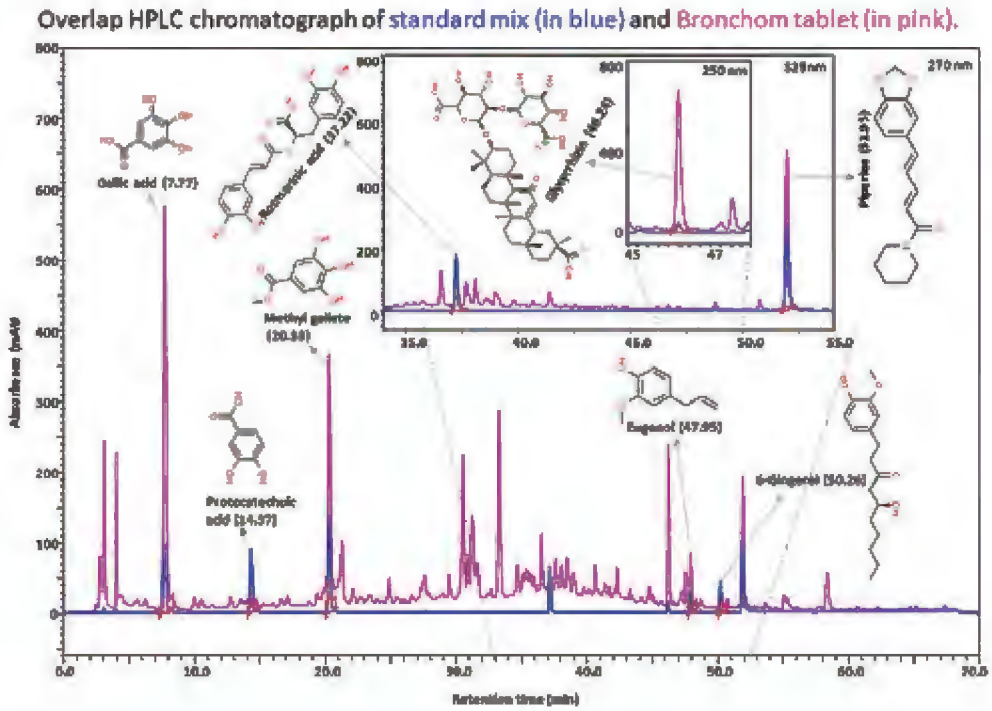


Fig.1: Ultra High Performance Liquid Chromatograph (UHPLC) study of Bronchom confirms the presence of gallic acid, protocatechuic acid, methyl gallate, rosmarinic acid, glycyrrhizin, eugenol, piperine, and 6 gingerol.

Dose and Method of Use of Bronchom:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

KshyaNIL क्षयनिल

Introduction to Tuberculosis:

Tuberculosis (TB) is a disease caused by microorganisms that spread via air from person to person. *Mycobacterium tuberculosis* is the bacteria that causes Tuberculosis. It is most commonly associated with the lungs, although it can also damage the brain, kidneys, or spine. If a person with tuberculosis does not receive treatment, they may die. TB continues to be a major global health problem, generating substantial morbidity and mortality across the world. Feelings of illness or weakness, weight loss, fever, and night sweats are all common signs of tuberculosis. Coughing, chest discomfort, and blood coughing are other indications of TB illness of the lungs. Close contact with an infected individual, living in overcrowded or poorly ventilated conditions, a compromised immune system (e.g., HIV infection), malnutrition, and drug misuse are all risk factors for TB infection.

The spread of TB can occur when a person with TB of the lungs or throat coughs, sneezes, speaks, or sings, releasing germs into the air. These germs can remain airborne for several hours, depending on the environment. People who breathe in TB germs can become sick; this is known as latent TB infection. Individuals with latent TB infections have TB germs in their bodies, but they are not ill because the germs are not active. They do not exhibit any symptoms of TB disease and cannot transmit or spread the germs to others. However, they might develop TB disease in the future and are often prescribed treatment to prevent this. People with tuberculosis are afflicted by active TB bacteria, which grow and damage tissue in their bodies, typically exhibiting signs of TB disease. Individuals with tuberculosis of the lungs or throat can transmit germs to others and are prescribed medication for tuberculosis treatment. Some strains of tuberculosis germs have developed antibiotic resistance, rendering previously effective medications ineffective. This type of TB is known as drug-resistant TB and occurs due to natural genetic changes in bacteria.

A random genetic change in a bacterium might give it some quality that makes it more likely to survive the attack of an antibiotic. If it does survive, then it can multiply. A random genetic alteration in bacteria may provide a feature that makes it more likely to survive an antibiotic attack. If it survives, it has the potential for rapid growth. When antibiotics are not used correctly — or when medications fail to kill all of the germs for other reasons — the conditions are ideal for more-resistant strains of bacteria to grow and multiply. If these germs are passed on to others, a new drug-resistant strain may develop over time. Globally, tuberculosis

creates major challenges to public health. Poverty, malnutrition, insufficient healthcare infrastructure, and the advent of drug-resistant strains all contribute to the disease's persistence and spread. Accurate TB diagnosis is critical for timely treatment and transmission prevention. Tuberculin skin tests (TST), interferon-gamma release assays (IGRAs), chest X-rays, and sputum cultures are all diagnostic procedures. TST and IGRAs assess the immunological response to tuberculosis, whereas chest X-rays and sputum cultures can confirm active illness. Early identification, appropriate treatment, infection control measures, and vaccination programmes are all part of the effort to manage and eliminate tuberculosis. In tuberculosis-endemic countries, new-borns are frequently immunised with the Bacille Calmette-Guerin (BCG) vaccine. TB is treated with a mixture of medicines over a lengthy period of time, generally six to nine months. Isoniazid, rifampin, pyrazinamide, and ethambutol are common therapy options. DOTS (Directly Observed Treatment, Short-Course) is a widely accepted technique for improving treatment adherence, reducing medication resistance, and increasing treatment success rates.

Ingredients and Medicinal Uses of KshyaNIL:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Choti Kateli (Wl. Pt.)	*Solanum surattense*	Kasaghna, Swasaghna, Jwaraghna	• Alleviates cough • Alleviates asthma • Alleviates fever	350 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Shoth Har,	• Anti-inflammatory	75 mg
Bhumi Amla (Wl. Pt.)	*Phyllanthus niruri*	Kasaghna, Swasaghna, Jwarahara	• Alleviates cough • Alleviates asthma • Alleviates fever	37.5 mg
Makoy (Wl. Pt.)	*Solanum nigrum*	Jwaraghna, Rasāyana ,	• Alleviates fever • Rejuvenating	37.5 mg
Shilajit Shuddha	Classical Preparation	Rasāyana	• Rejuvenating	50 mg

KshyaNIL is Useful in:

- **Tuberculosis**
- **Tuberculosis Associated liver Problems**

KshyaNIL: Description in Classical Texts:

KshyaNIL is an Ayurvedic proprietary medicine prepared by using Choti kateli which has pungent and bitter tastes with qualities of lightness and dryness; hot potency and katu vipaka.

Punarnava extract is bitter in taste. The physical property is lightness. It's vipaka is katu and potency is cold. It pacifies pitta, kapha doshas and aggravates vata dosha; alleviates blood diseases.

Bhumi Amla is sweet, bitter, astringent in taste; with the qualities of heaviness and dryness. This drug is cold in potency; and pacifies pitta, kapha doshas while aggravating vata dosha; and can alleviate indigestion, thirst, cough, blood diseases, eczema and phthisis.

Shuddha shilajit has pungent and bitter taste with hot potency and katu vipaka. It is rejuvenating. Makoy is called Kakamachi in Ayurvedic texts and Bhava prakasha has included it under Guduchyadi varga. It has a bitter taste with the properties of lightness and sliminess and pacifies all three doshas. This drug has neither hot nor cool potency and katu vipaka.

Scientific Evidence of KshyaNIL:

Solanum surattense (Chotikateli, Hindi vernacular name) is one of the major plant components in KshyaNIL. Tuberculosis is a serious and deadly disease that claims millions of lives each year. In 2021, an estimated 1.6 million people died from TB, including 187,000 individuals with HIV. TB is the 13th leading cause of death worldwide and the second leading infectious killer after COVID-19.

We conducted experiments to investigate the therapeutic potential of *Solanum surattense* extract, also known as Chotikateli extract, against tuberculosis. Our research involved the use of *Mycobacterium smegmatis* (strain mc2155), a non-pathogenic mycobacterium closely related to the pathogenic strains of Mycobacterium tuberculosis, the causative agent of tuberculosis. *Mycobacterium smegmatis* is a fast-growing organism that is easy to culture in the laboratory, making it a valuable model for studying tuberculosis. It shares a high degree of similarity in cell wall structures and metabolic pathways with aerobic and rod-shaped bacteria. Notably, *Mycobacterium smegmatis* also shares a significant number of genes encoding virulence factors found in Mycobacterium tuberculosis. As a result, it is extensively used for identifying and characterizing virulence factors, studying drug resistance mechanisms, and developing/testing new tuberculosis vaccines. Therefore, *Mycobacterium smegmatis* is a valuable model for tuberculosis research due to its fast growth, ease of culturing, convenience, and cost-effectiveness.

In this study, we report the antimycobacterial potency of Chotikateli extract. The Minimum Inhibitory Concentration (MIC) of Chotikateli extract against mc2155 was observed to be approximately 8 mg/ml. We observed a dose-dependent reduction in the viability of bacilli in the presence of Chotikateli extract. Chotikateli extract treatment dose dependently impeded

the growth kinetics of mc2155. SEM analysis of mc2155 strain revealed that Chotikateli extract treatment compromises the health of the bacilli. HPTLC-based lipid profiling demonstrated that with increasing doses of Chotikateli extract, the lipid content in mc2155 concomitantly reduced, indicating that Chotikateli extract targets the bacilli by compromising the cell wall integrity.

During infection, tuberculosis bacilli encounter a physiological stress environment inside the host. We conducted experiments exposing mc2155 to similar stress conditions under in vitro settings. Interestingly, the mc2155 strain was more susceptible to Chotikateli extract under acidic, oxidative, nitrosative, and hypoxia stress conditions. Host-infection experiments showed that Chotikateli extract inhibits the intracellular survival of mc2155. Moreover, when first-line anti-tuberculosis drugs, isoniazid and rifampicin, were combined with Chotikateli extract, we observed better clearance of intracellular bacilli compared to anti-tuberculosis drugs alone. In summary, Chotikateli extract exhibits the potential to be a promising component of anti-tuberculosis therapy.

KshyaNIL was analyzed by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) technique. In the analysis of KshyaNIL, the different compounds were observed at 270 nm wavelength mainly trigonelline (2.94 minutes), gallic acid (9.54 minutes), 4-hydroxybenzoic acid (22.29 minutes), cinnamic acid (55.83 minutes), and boeravinone B (66.34 minutes); at 325 nm wavelength neochlorogenic acid (19.26 minutes), chlorogenic acid (25.34 minutes), cryptochlorogenic acid (27.01 minutes), isochlorogenic acid A (45.06 minutes), isochlorogenic acid B (46.01 minutes), isochlorogenic acid C (47.99 minutes); at 230 nm wavelength benzoic acid (43.17 minutes), as shown in Fig. 1 and Table 1. In the chromatograms, the blue line represents the standard and pink line shows the test sample.

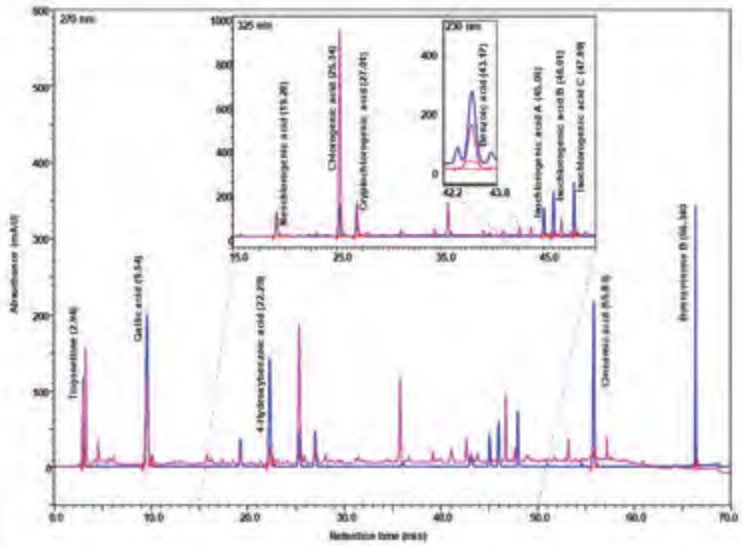
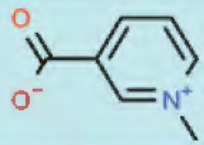
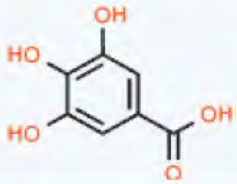
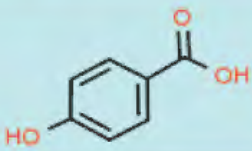
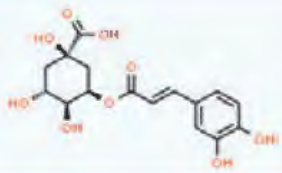
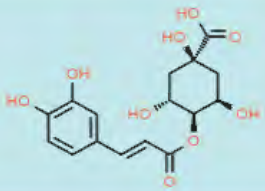
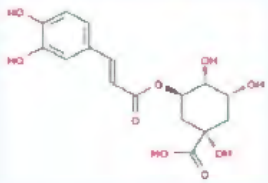
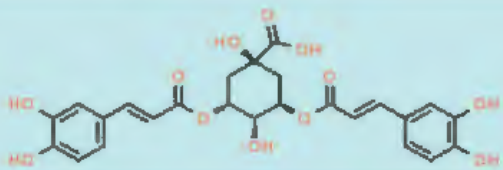
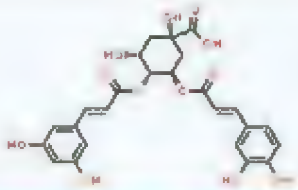
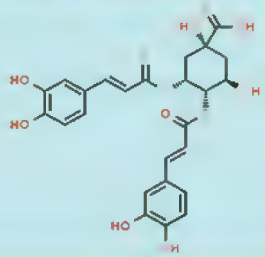
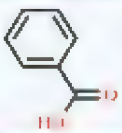
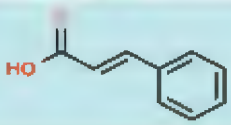
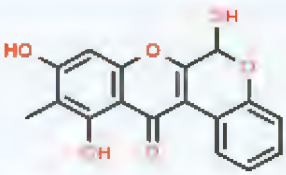


Fig. 1. Analysis of KshyaNIL by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In KshyaNIL, the different compounds were obtained at 270 nm wavelength mainly trigonelline (2.94 minutes), gallic acid (9.54 minutes), 4-hydroxybenzoic acid (22.29 minutes), cinnamic acid (55.83 minutes), and boeravinone B (66.34 minutes); neochlorogenic acid (19.26 minutes), chlorogenic acid (25.34 minutes), cryptochlorogenic acid (27.01 minutes), isochlorogenic acid A (45.06 minutes), isochlorogenic acid B (46.01 minutes), isochlorogenic acid C (47.99 minutes) at 325 nm wavelength; benzoic acid (43.17 minutes) at 230 nm wavelength. In the chromatograms, the blue line indicates the standards and pink line indicates the test sample.

Table 1. Chemical structures of different compounds obtained during the analysis of KshyaNIL by UHPLC.

S.N.	Compound Name	Chemical structure
1.	Trigonelline	
2.	Gallic acid	
3.	4-Hydroxy benzoic acid	
4.	Neochlorogenic acid	
5.	Cryptichlorogenic acid	
6.	Chlorogenic acid	
7.	Isochlorogenic acid A	

8.	Isochlorogenic acid B	
9.	Isochlorogenic acid C	
10.	Benzoic acid	
11.	Cinnamic acid	
12.	Boeravinone B	

Dose and Method of Use of KshyaNIL:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Or as directed by the physician.	

Tablet

AUROGRIT ऑरोग्रिट

Introduction to Cancer:

Cancer is a complex and broad term that encompasses a group of diseases characterized by the uncontrolled growth and spread of abnormal cells. It can affect any part of the body and has the potential to invade nearby tissues and metastasize to distant organs. Cancer is one of the leading causes of death worldwide and has a significant impact on individuals, families, and society as a whole.

Cancer is a global health concern, and its prevalence has been increasing over the years. Factors such as elderly populations, lifestyle changes, and environmental exposures contribute to the rising incidence of cancer. The most common types of cancer include lung, breast, colorectal, prostate, and stomach cancer. However, there are numerous other types that can affect various organs and systems in the body.

The management of cancer depends on several factors, including the type and stage of cancer, as well as the overall health of the patient. Here are some key approaches in cancer management:

Prevention: Promoting healthy lifestyle choices, such as avoiding tobacco and excessive alcohol consumption, maintaining a balanced diet, exercising regularly, protecting against infectious agents (e.g., HPV, hepatitis B), and minimizing exposure to carcinogens (e.g., UV radiation, asbestos), can reduce the risk of developing certain cancers.

Early detection and screening: Regular screenings and early detection can significantly improve treatment outcomes. Common screening methods include mammograms for breast cancer, Pap smears for cervical cancer, colonoscopies for colorectal cancer, and PSA tests for prostate cancer.

Surgery: Surgical intervention is often employed to remove cancerous tumors and surrounding tissues. It may be curative if the cancer is localized and hasn't spread to other parts of the body. In some cases, surgery is performed to relieve symptoms or to debulk tumors before other treatments.

Radiation therapy: This treatment modality utilizes high-energy radiation to kill cancer cells or inhibit their growth. It can be delivered externally or internally (brachytherapy). Radiation therapy may be used as a primary treatment, in combination with surgery or chemotherapy, or to alleviate symptoms in advanced cases.

Chemotherapy: Chemotherapy involves the use of drugs that target and kill rapidly dividing cancer cells. It can be administered orally,

intravenously, or through other methods. Chemotherapy is often used in systemic treatment approaches, as it can reach cancer cells throughout the body. It may be employed before surgery (neoadjuvant) to shrink tumors or after surgery (adjuvant) to eliminate remaining cancer cells.

Targeted therapy: Targeted therapies are designed to specifically target certain molecular alterations or pathways involved in cancer cell growth. They can be more precise than traditional chemotherapy and may cause fewer side effects. Targeted therapies include monoclonal antibodies, small molecule inhibitors, and immunotherapies.

Immunotherapy: Immunotherapy aims to enhance the body's immune system to recognize and destroy cancer cells. It includes therapies such as immune checkpoint inhibitors, CAR-T cell therapy, and cancer vaccines. Immunotherapy has shown promising results in various types of cancer and has revolutionized cancer treatment.

Palliative care: Palliative care focuses on improving the quality of life for individuals with advanced or terminal cancer. It involves managing symptoms, providing pain relief, addressing psychological and emotional needs, and offering support to patients and their families.

It is important to note that cancer treatment is highly individualized, and a multidisciplinary approach involving oncologists, surgeons, radiation oncologists, and other healthcare professionals is often necessary to provide comprehensive care. Ongoing research and advancements in personalized medicine continue to expand the range of treatment options and improve outcomes for cancer patients.

Ingredients and Medicinal Uses of Aurogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Karkatashringi (Ga.)	*Pistacia integerrima*	Balya, kaphanissarak, Kashar, Kshayaghna	• Strength promoting • Expectorant • Alleviates cough • Alleviates phthisis	500 mg

Aurogrit is Useful in:

- **Tumour**
- **Cough**
- **Cold**
- **Bronchitis**

Aurogrit: Description in Classical Texts:

Aurogrit is an Ayurvedic proprietary medicine whose main ingredient is Karkatakashringi. Bhavaprakasha has included this under Hareetakyadi varga. This drug has been used traditionally in Ayurvedic medicine for a variety of conditions including Pyrexia, Phthisis and Respiratory diseases. It is astringent and bitter in tastes and hot in potency and pacifies kapha vata doshas.

Scientific Evidence of Aurogrit:

The study conducted by Patanjali research Foundation was an effort to explore the anti-lung cancer potential of gall developed on the genus Pemphigus on the leaves and petiole of a deciduous tree, *Pistacia integerrima* (commonly known as crab,s claw), named Karkatasrngiakam raktapallavam in Sanskrit binomial system. This tree is native to Asia, growing at an altitude of 350 to 2400 m, and belongs to the family Anacardiaceae. The graphical abstract of the study is shown in Fig.1.

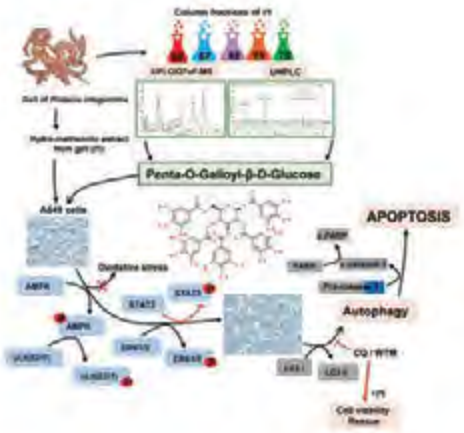


FIGURE 1 | *Pistacia integerrima* induces selective toxicity in non-small cell lung cancer cells. Different PI concentrations post 24 h of treatment were assessed for cytotoxicity using Alamar blue assay. Percent cell viability was calculated with respect to the untreated. DMSO of 0.9% present in 300 µg/ml of PI (3 times of maximum dose) served as vehicle control in the cell viability assays. (A) Percent cell viability of PI in HEK293, Beas2B, and A549 cells (n = 3). A significant difference was determined in A549 with respect to HEK and Beas2B percent cell viability. (B) Percent cell viability in NCI-H460 and A549 cells (n = 3). A significant difference was evaluated in A549 and NCI-H460 with respect to their respective vehicle control. Two-way ANOVA employing Tukey's multiple comparison test (α = 0.05) was used to analyze significant differences in the cell viability of treated cells. Error bars represent mean ± SEM; the significance of data was represented as *p < 0.05, ***p < 0.0005, #p < 0.0001 and not significant (ns) if p > 0.05. (C) A549 cells were treated with PI for 24, 48, and 72 h. The log(µg/ml) concentrations −1, −0.5, 0, 1, 1.5, 2, and 2.5 correspond to 0.1, 0.3, 1, 3, 10, 30, 100, and 300 µg/ml of PI (n = 3). The half-maximal inhibitory concentration (IC50) of PI was evaluated by fitting the non-linear regression dose–response curve on PI-treated curves in GraphPad 8.0. Broken lines (---) mark the IC50 on the non-linear fit. (D). Brightfield images depict A549 cells treated with PI for 24 h at indicated concentrations. Images were captured under the inverted microscope at 40 × magnification.

The study demonstrates that hydro-methanolic extract of *Pistacia integerrima* gall was more sensitive toward non-small lung cancer cells, A549 and NCI-H460 compared to the normal non-cancer human cells, human embryonic kidney cells (HEK293) and human bronchial epithelial cells (Beas2B), shown in Fig.2.

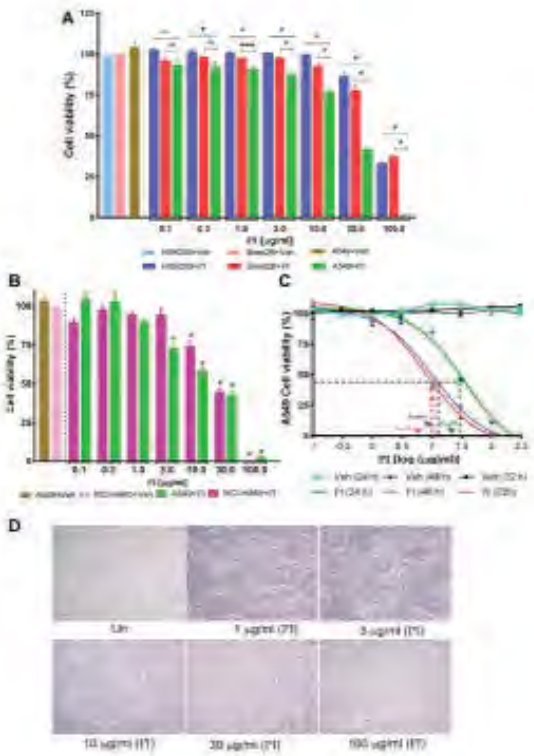


Fig. 2: *Pistacia integerrima* induces selective toxicity in non-small cell lung cancer cells..

Pistacia integerrima ranging from 0.3 µg/ml to 10 µg/ml had no effect on the viability of human embryonic kidney cells (HEK293) and human bronchial epithelial cells (Beas2B) cells, however, cytotoxic to the lung cancer cells (A549) at similar doses. *Pistacia integerrima* at 30 µg/ml reduced cell viability by 10% in human embryonic kidney cells (HEK293) and 20% in human bronchial epithelial cells (Beas2B) compared to 60% in A549 cells. However, a *Pistacia integerrima* concentration of 100 µg/ml impaired the survival of all cell types, whether from a non-cancer or cancer lineage (Figure 1A). The specificity of *Pistacia integerrima* towards cancer cells was also investigated in NCI-H460 cells, which are another kind of non-small cell lung cancer cell. Although *Pistacia integerrima* exhibited equal cytotoxicity in both cell types, A549 and NCI-H460, 3 µg/ml of *Pistacia integerrima* reduced cell viability significantly in A549 (Figure 1B). At 10 g/ml concentration, there is a discernible difference between *Pistacia integerrima* and A549 and NCI-H460, although the findings imply that

Pistacia integerrima is preferentially more cytotoxic to lung cancer cells (Figures 1A,B). The half-maximal inhibitory concentration (IC50) of *Pistacia integerrima* in A549 was lowered from 35.2 g/ml to 10.3 g/ml and 7.8 g/ml after 24, 48, and 72 hours of treatment, respectively (Figure 1C). Brightfield microscopic images indicate cells transforming into spherical cellular bodies, going to shrinkage, and consequently reducing in numbers suggesting that A549 cells confront morphological changes with *Pistacia integerrima* (Figure 1D).

Interestingly, *Pistacia integerrima* is a distinct from other phyto-extracts that exert bioactivity at higher concentrations. *Pistacia integerrima* at non-lethal, and sub-lethal curtails the colony formation, tumor development-like, and metastatic characteristics of A549. Ultra performance Liquid chromatography equipped with quadrupole time-of-flight mass spectrometry (UPLC/ QToF-MS) study performed at Patanjali confirms that *Pistacia integerrima* contains gallotannins like gallic acid, methyl gallate, penta-O-galloyl-β-D-glucose etc. About 23 compounds were identified and confirmed by mass and its adduct studies as shown in fig. 3A table 1 which are responsible for curtailing the lung cancer progression. Further isolation of compound was followed to characterize and identify the phytocompound. Column fractions and their potential of targeting A549 cells suggested that *Pistacia integerrima* although enriched with numerous gallotannins, the anti-lung cancer activity is by virtue of Penta-O-galloyl-β-D-Glucose (PGG) as shown in Fig. 3 B,C and D. Plants namely, Galla Rhois, Rhus chinensis, and Paeonia suffruticosa are known sources of Penta-O-galloyl-β-D-Glucose. Our study demonstrates the leaf gall of *Pistacia integerrima* as an unexplored natural source of Penta-O-galloyl-β-D-Glucose.

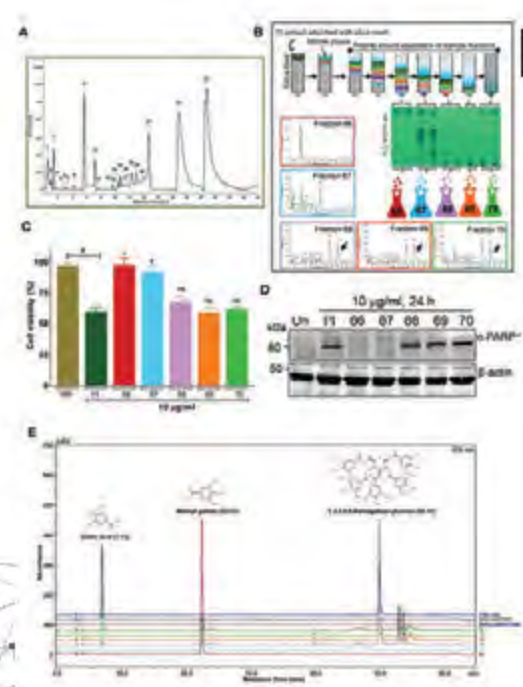


Fig.3 Penta-O-galloyl-β-D-glucose (PGG) was identified as a bioactive phytocompound present in the gall extract of *Pistacia integerrima*. (A) Ultra performance Liquid chromatography equipped with quadrupole time-of-flight mass spectrometry (UPLC/ QToF-MS) study confirm the presence of 23 compounds. The compound and their respective formula, neutral versus observed mass at specific retention time and adducts are briefed in table 1. (B) Schematic fractionation of *Pistacia integerrima* extract through column chromatography, collects 34 aliquots, and fractions 66,67,68, 69, and 70 were studied on UPLC/QToF-MS. Compound eluted from 18 to 21 minutes and 22 to 26 minutes correspond to 1,2,3,4,6-Pentagalloyl Glucose (PGG) and 2-O-digalloyl-1,3,4,6-tetra-O-β-D-galloyl Glucose respectively and were not detected in fraction 66 and 67. (C) Percent cell viability was evaluated in A549 cells treated with different fractions at 10 µg/ml for 24 h. Alamar blue assay determined the percent viability in all treatments (n = 4). Significance in percent viability in all treatments is calculated with respect to PI. Error bars represent mean ± SEM; significance of data represented as *p < 0.05 and not significant (ns) if p > 0.05. (D) Whole cell lysates prepared from A549 cells after 24 h of treatments with PI at 10 µg/ml, were subjected to Western blotting using antibodies against cleaved PARP1. β-Actin served as a loading control. (E) Presence and absence of Pentagalloyl Glucose (PGG), gallic acid and methyl gallate in *Pistacia integerrima* and other fractions were confirmed by Ultra High Performance Liquid Chromatograph (UHPLC) study.

S.N.	Component name	Formula	Neutral mass (Da)	Observed m/z	RT (min)	Response	Adducts
1	3-Galloyl-Glucose	$C_{13}H_{16}O_{10}$	332.0744	331.0673	0.61	557725	-H
2	1-Galloyl-Glucose	$C_{13}H_{16}O_{10}$	332.0744	331.067	1.05	662680	-H
3	Gallic acid	$C_7H_6O_5$	170.0215	169.0142	1.41	1499659	-H
4	6-O-galloylGlucose	$C_{13}H_{16}O_{10}$	332.0744	331.0672	1.5	161502	-H
5	Ethyl gallate	$C_9H_{10}O_5$	198.0528	243.0511	2.49	74510	+HCOO
6	3-Galloylshikimic acid	$C_{14}H_{14}O_9$	326.0638	325.0567	2.95	303895	-H
7	4-O-Galloylshikimic acid	$C_{14}H_{14}O_9$	326.0638	325.0567	3.36	138736	-H
8	2-(Hydroxymethyl)phenyl hexopyranoside	$C_{13}H_{18}O_7$	286.1053	331.1036	4.25	313570	+HCOO, -H
9	Methyl gallate	$C_8H_8O_5$	184.0372	183.0298	5.68	4727517	-H
10	Digallic acid	$C_{14}H_{10}O_9$	322.0325	321.0257	7.17	1877370	-H
11	2,4,6-Tri-O-galloyl-β-D-Glucose	$C_{27}H_{24}O_{18}$	636.0963	635.0891	7.74	120037	-H, 2x(-H)
12	1,2,3-O-tri-galloyl-beta-d-Glucose	$C_{27}H_{24}O_{18}$	636.0963	635.0903	9.61	427250	-H, 2x(-H)
13	1,2,6-Tri-O-galloyl-b-D-Glucose	$C_{27}H_{24}O_{18}$	636.0963	635.0904	10.03	129110	-H, 2x(-H)
14	6'-O-Galloylsalicin	$C_{20}H_{22}O_{11}$	438.1162	437.1102	10.28	227787	-H
15	1,2,4,6-TetragalloylGlucose	$C_{34}H_{28}O_{22}$	788.1072	787.1027	10.47	563628	-H, 2x(-H)
16	2,6-Dihydroxy-4-(methoxycarbonyl)phenyl 3,4,5-trihydroxybenzoate	$C_{15}H_{12}O_9$	336.0481	335.0412	10.74	1008912	-H
17	2,3,4,6-TetragalloylGlucose	$C_{34}H_{28}O_{22}$	788.1072	787.1008	10.98	153333	-H, 2x(-H)
18	1,2,3,6-Tetra-O-galloyl-β-D-Glucose	$C_{34}H_{28}O_{22}$	788.1072	787.1016	12.29	1171529	-H, 2x(-H)
19	1,2,3,4-TetragalloylGlucose	$C_{34}H_{28}O_{22}$	788.1072	787.102	12.98	1782315	-H, 2x(-H)
20	1,3,4,6-TetragalloylGlucose	$C_{34}H_{28}O_{22}$	788.1072	787.1012	13.82	215321	-H, 2x(-H)
21	2,3-Dihydroxy-5-(methoxycarbonyl)phenyl 3,4,5-trihydroxybenzoate	$C_{15}H_{12}O_9$	336.0481	335.041	14.73	6366418	-H
22	1,2,3,4,6-Pentagalloyl Glucose	$C_{41}H_{32}O_{26}$	940.1182	939.1135	18.85	25421378	-H, 2x(-H)
23	2-O-digalloyl-1,3,4,6-tetra-O-β-D-galloylGlucose	$C_{48}H_{36}O_{30}$	1092.129	1091.128	22.86	8232115	-H

This study demonstrated that Penta-O-galloyl-β-D-Glucose in *Pistacia integerrima* induced autophagy via the AMPK pathway that further diverts cells towards apoptosis. Interestingly, the autophagic cell death through Penta-O-galloyl-β-D-Glucose and *Pistacia integerrima* is independent of Reactive Oxygen Species. *Pistacia integerrima* through Penta-O-galloyl-β-D-Glucose impedes STAT3 activation but activates ERK signaling, which plays a central role in en routing lung cancer cells toward apoptosis. This study revealed a natural source of Penta-O-galloyl-β-D-Glucose and an underlying molecular mechanism that can be further exploited to develop adjuvant chemotherapy against lung cancer.

Dose and Method of Use of Aurogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://doi.org/10.3389/fphar.2022.889335

SHILA TULSI DROPS शिला तुलसी ड्रॉप्स

Introduction to Immunity, Stamina and Endurance, Respiratory Health, and Cough and Cold:

Immunity is an organism's capacity to fight or protect itself against dangerous pathogens such as bacteria, viruses, and parasites, as well as to recognize and destroy unusual or damaged cells inside the body. The immune system is critical in preserving an individual's general health and well-being. The immune system is a complex network of organs, tissues, cells, and substances that unite to keep the body safe. The immune system is divided into two parts: the innate immune system and the adaptive immune system. The innate immune system serves as the initial line of defense, providing rapid, nonspecific protection against a wide variety of infections. Physical barriers such as the skin, mucous membranes, and secretions keep infections out of the body. Pathogens are also detected and destroyed by cells such as neutrophils, macrophages, and natural killer cells. The adaptive immune system, on the other hand, responds specifically to certain infections. It recognizes and remembers certain antigens (molecules present on pathogen surfaces) and performs a focused attack to remove them. The adaptive immune system is made up of specialized cells such as B and T cells. B cells make antibodies that attach to antigens and label them for destruction, whereas T cells assault infected cells directly or support other immune cells in their duties. A strong immune system is crucial for general well-being. Nutrition, sleep, exercise, and stress management are all elements that impact immune function. A healthy diet rich in fruits, vegetables, whole grains, provides minerals, and antioxidants required to promote immunological function. Regular physical activity and enough sleep are also required for healthy immune system efficiency.

The words stamina and endurance refer to the body's ability to sustain physical activity over a long period of time. They are necessary components of physical fitness and play an important role in a variety of activities such as sports, exercise, and daily jobs that demand sustained effort. The ability of the body to tolerate tiredness through continuous exertion is referred to as stamina. It involves the proper operation of the cardiovascular system, respiratory, and energy production pathways. Endurance, on the other hand, is defined as the capacity to maintain a given level of performance over time and is strongly connected to stamina. Improving stamina and endurance requires a combination of cardiovascular conditioning, muscular strength, and efficient energy utilization.

Respiratory health refers to the overall health of the respiratory system, which includes the lungs, airways, and other breathing components. Maintaining respiratory health is critical for proper oxygen intake, CO2 elimination, and general physiological performance. Environmental pollutants, smoking, occupational exposures, infections, allergies, and genetic predisposition are all capable of having an impact on respiratory health. Poor respiratory health can lead to various conditions, such as asthma, Chronic Obstructive Pulmonary Disease (COPD), pneumonia, and lung cancer.

Acute Upper Respiratory Tract virus Infections (URTIs) are the most common human illnesses, with adults experiencing two to five common colds per year and school-aged children experiencing seven to ten colds per year. The symptoms of a cold can include a coughing, sore throat, runny or stuffy nose, and sneezing. The symptoms of URTIs are so common that self-diagnosis of common cold or influenza (flu) is normal among the general public and clinical diagnosis is usually the only diagnosis used by the physician. Over 200 serologically different viral types are responsible for human URTIs, with the rhinoviruses being the most common cause. Viruses that causes colds can spread from person to person through the air and close personal contact. You can prevent colds by doing your best to be well and keep others healthy, which includes: Clean your hands. Avoid close contact with individual who have colds or any other upper respiratory infections. Cover your nose and mouth when sneezing and coughing. Avoid touching eyes, mouth and nose with unwashed hands. Don't smoke.

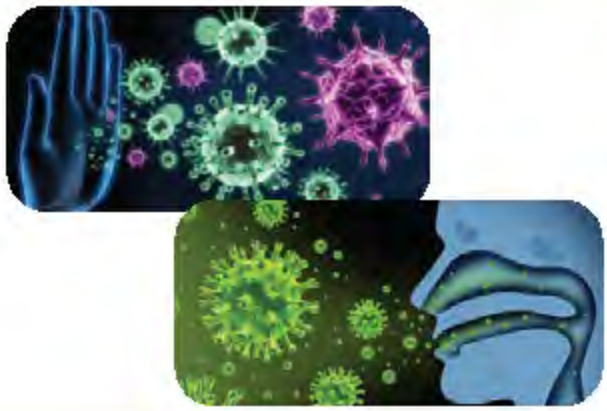
Ingredients and Medicinal Uses of Shila Tulsi Drops:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Quantity
Distillates of:				
Holy Basil (A. Pt.)	*Ocimum sanctum*	Swas-Kas, Pratishyay, Jwar-Har	• Useful in cough • Breathing difficulties • Fever	2 ml
Ram Tulsi (A. Pt.)	*Ocimum gratissimum*	Vishaghna, Pratidushak, Kasthar	• Anti poisonous	1.5 ml
Barbari Tulsi (A. Pt.)	*Ocimum basilicum*	Uttejak, Jwaraghna, Swas-Kashar	• Useful in cough • Breathing difficulties • Fever.	3.5 ml
Nimbu Tulsi (A. Pt.)	*Ocimum citriodorum*	Rochak, Deepan, Swas-Kas Har	• Increases appetite, • Useful in cough • Breathing difficulties	0.5 ml
Kathinjar Tulsi (A. Pt.)	*Ocimum canum*	Swas-Kas-Pratishyay Har	• Useful in coug • Breathing difficulties • Rhinorrhea	0.5 ml

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Quantity
Extract of:				
Shilajeet (Rock Exd.)	*Asphaltum punjabianum*	Rasayan, Yogvahi	• Rejuvenating • Enhances activity of other drugs	0.015 ml

Shila Tulsi Drops is Useful in:

- **Improves Overall Immunity**
- **Respiratory Health**
- **Improves Stamina and Endurance**
- **Relief from Cough and Cold**



Shila Tulsi Drops: Description in Classical Texts:

Shila Tulsi drops is an Ayurvedic proprietary medicine that is made up of distillates of five types of tulsi plants that are beneficial in respiratory problems.

Holy Basil is pungent and bitter in taste with a hot potency, and has dryness as the main property. It pacifies vata and kapha doshas and aggravates pitta dosha. This herb is useful in skin diseases, dysuria, burning sensation, and diseases caused by vitiation of blood. It acts as a cardiac toner and appetizer.

Ram Tulsi is pungent and bitter in taste with a hot potency, and has dryness as the main property. It pacifies vata and kapha doshas and aggravates pitta dosha. This herb is useful in skin diseases, dysuria, burning sensation, and diseases caused by vitiation of blood. It acts as a cardiac toner and appetizer.

Barberi is pungent and astringent in taste having cold potency. It has lightness and dryness as the main properties. This herb pacifies vata and kapha doshas and aggravates pitta dosha. Useful in poisoning and disease caused by vitiation of blood. It acts as a cardiac toner and appetizer.

Nimbu Tulsi is metioned under pushpavarga in Bhava prakasha and it increases appetite, and is useful in cough as well as breathing difficulties. Kathinjar Tulsi is useful in cough, breathing difficulties and rhinorrhea.

Shilajeet Extract It is katu (pungent), tikta (bitter) in taste. It pacifies kapha. It has katu vipaka.

Acts as a tonic and laxative. It cures polyuria, calculas, diabetes mellitus, dysuria, asthma, hemorrhoids, anemia, epilepsy, hysteria, edema, skin disease, worm infestation. It acts synergistically when gives with another drugs.

Scientific Evidence of Shila Tulsi Drops:

To study the phytochemical constituents of Shila Tulsi drop, Gas Chromatography Tandem Mass Spectrometry (GC-MS/MS) analysis was performed. Three major constituents, linalool, anethole, and myristic acid are found to be present which was identified by mass and its fragmentation. These compounds were further confirmed by comparing them with National Institute of Standards and Technology mass spectral library. Fig. 1 shows linalool, anethole, and myristic acid eluting at 7.415, 9.147, and 30.048 minutes respectively.

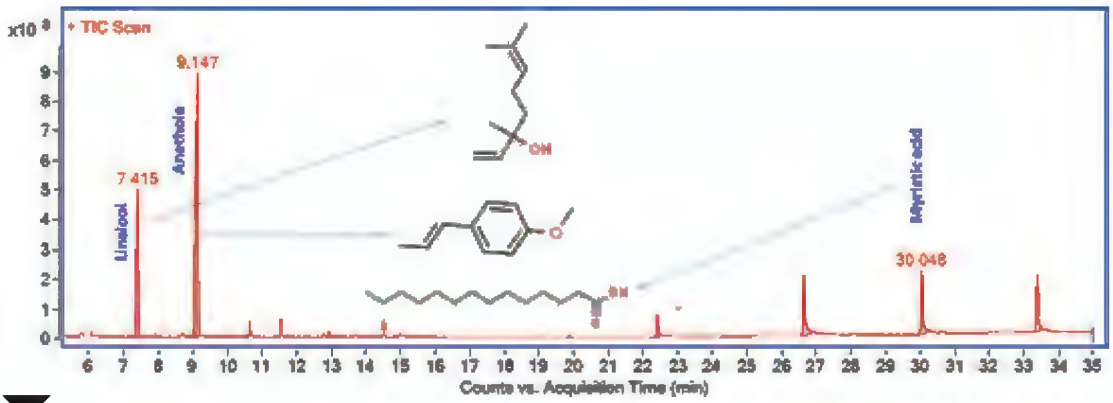


Fig 1: Gas Chromatography with mass detector (GC MS/MS) profile of Shila Tulsi Drop. Molecular structure with a retention time of major constituents, linalool, anethole, and myristic acid shown.

Dose and Method of Use of Shila Tulsi Drops:

Dose and Frequency	1-2 drops, two to three times a day
Adjuvant	Glass of water or cup of tea
Or as directed by the physician.	

Tablet

अर्जुन घनवटी

ARJUN GHANVATI

Introduction to Cardiovascular diseases :

Cardiovascular diseases, usually referred to as cardiac disorders, are a group of ailments that affect the heart and blood arteries. These illnesses are a major cause of morbidity and mortality globally and constitute a serious risk to people's health. The prevalence of cardiac disorders is Coronary artery disease (CAD). CAD is a frequent type of cardiac dysfunction that occurs when the coronary arteries, responsible for supplying oxygenated blood to the heart muscle, narrow or get blocked by a build up of plaque. Angina (chest pain), heart attacks, and heart failure can all be caused by CAD. Another common disorder is Arrhythmia, characterized by abnormal heart rhythms, which can be too rapid, too slow, or irregular. These irregularities may interfere with the heart's capacity to properly pump blood.

The burden of these diseases has been reduced thanks to efforts in preventative measures, early detection, and care of cardiac abnormalities. Better results for people with cardiac problems are still being made possible through public awareness campaigns, expanded access to healthcare services, and developments in medical technology and research.

Fatigue, shortness of breath, and fluid retention are signs of heart failure, a chronic condition in which the heart weakens and is unable to pump blood effectively. Other cardiac conditions that affect the structure or functionality of the heart include valvular heart disease, congenital heart defects, and cardiomyopathy.

Numerous risk factors, such as smoking, a poor diet, inactivity, obesity, high blood pressure, diabetes, and high cholesterol levels, have an impact on the occurrence of cardiac problems. Other important factors include family history, gender, and age.

The risk of cardiac disorders is associated with several factors. An unhealthy lifestyle, which includes a sedentary schedule, poor dietary decisions, smoking, excessive alcohol intake, and stress, is one of the main risk factors. All of these habits increase the likelihood of developing heart problems, including hypertension, obesity, high cholesterol, and diabetes.

Other risk factors include having a family history of heart disease, advancing age, being male (as men are often at higher risk), and having certain underlying illnesses such as kidney disease and autoimmune disorders. A person's risk of subsequent cardiac issues is further elevated if they have a history of previous heart attacks or strokes.

Heart attacks, heart failure, arrhythmias, and stroke are just a few of the serious effects that cardiac problems can have. Thus, it is essential to manage and lower these risk factors by adopting a healthy lifestyle, engaging in regular exercise, maintaining a balanced diet, managing stress levels, abstaining from smoking and excessive alcohol use, and scheduling regular checkups to monitor blood pressure, cholesterol levels, and other pertinent factors.

The possibility of having cardiac illnesses can be considerably decreased by being aware of the risk factors connected with them and implementing the proper preventive actions, which can also improve heart health.

Helps in reducing the risk of cardiac disorder- Maintaining heart health and preventing life-threatening illnesses like heart attacks and strokes depend on lowering the risk of cardiac problems. It is possible to dramatically reduce the chance of acquiring heart diseases by making a number of lifestyle changes and preventative actions, following are some crucial measures.

Healthy Eating: Eating a well-balanced diet that is high in fruits, vegetables, whole grains, lean proteins, and healthy fats will help lower the risk of heart problems. It's crucial to stay away from trans fats, excessive salt, and sugar. Lower cardiovascular risk has been linked to the Mediterranean diet and the DASH (Dietary Approaches to Stop Hypertension) diet.

Exercise on a Regular Basis: Regular exercise, such as jogging, cycling, swimming, or brisk walking, can strengthen the heart and enhance cardiovascular health. Aim for 75 minutes of strenuous exercise or 150 minutes of moderate exercise each week.

Quitting smoking: Smoking increases the risk of developing heart diseases. The risk of heart disease can be considerably decreased by quitting smoking. Use nicotine replacement therapy or seek expert assistance if necessary.

Keeping a Healthy Weight: Being overweight and obese increases your risk of developing heart disease. This risk can be decreased by maintaining a healthy weight through a mix of a balanced diet and frequent exercise.

Managing Stress: Cardiac problems might develop as a result of persistent stress. Stress levels can be lowered by practising stress-reduction strategies including yoga, meditation, deep breathing exercises, or engaging in hobbies.

Health check-ups- Regular health check-ups can help identify and treat risk factors for heart problems, such as high blood pressure, high cholesterol, and diabetes. These trips to the doctor for check-ups and screenings should be made on a regular basis.

Maintaining cardiovascular health and lowering the risk of heart disease require strengthening the heart muscle. Strength training exercises can also be good for the heart because they build muscle and enhance overall body composition. These workouts involve lifting weights, utilising resistance bands, or doing exercises with your own body weight like pushups and squats.

Strength training improves blood flow, lowers blood pressure, and improves heart function.

Equally crucial is incorporating a balanced, heart-healthy diet. The best heart health is maintained by consuming nutrient-rich meals, which should include fruits, vegetables,

whole grains, lean meats, and healthy fats. Additionally, it's important to moderate the intake of saturated fats, trans fats, cholesterol, and sodium, as they can contribute to heart disease

Cutting back on sodium is essential for decreasing blood pressure. To help with this, limit processed food intake, cook without adding salt, and read product labels to select low-sodium options.

Maintaining a healthy weight is crucial for controlling blood pressure. Blood pressure can be considerably lowered by losing excess weight, especially around the waist.

Limit Alcohol Consumption: Drinking too much alcohol might cause blood pressure to rise. It is advised to keep intake to moderate levels, which for men and women translates to no more than two drinks each day.

It is crucial to remember that these lifestyle changes should be put into place after consulting a healthcare provider. Additionally, those who have hypertension might need to take prescription medication in order to reach their target blood pressure levels.

Treatment for Cardiac disorder: Cardiovascular disorders must be treated using a multifaceted strategy that includes lifestyle changes (such as adopting a healthy diet, engaging in regular exercise, and quitting smoking), medications (such as beta-blockers, anticoagulants, and cholesterol-lowering medications), surgical interventions (such as angioplasty, bypass surgery, and valve replacement), and cardiac rehabilitation programmes.

Ingredients and Medicinal Uses of Arjun Ghanvati:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Arjun (Bk.)	*Terminalia arjuna*	Hirdyavikar Har Raktvikar Har	• Good for heart health • Alleviates blood diseases	400 mg

Arjun Ghanvati is Useful In:

- **Reducing Cardiac Disorder**
- **Strengthens Heart Muscles**
- **Regulates Blood Pressure**

Arjun Ghanvati: Description in Classical Texts:

Arjun comes under Vataadi Varga in bhavprakash nighantu. It has astringent taste, light property with cold potency; and pacifies pitta & kapha doshas. It acts as a cardiac tonic, and is useful in poisoning, blood diseases, obesity, polyuria, ulcer, and phthisis.

Scientific evidence of Arjun Ghanvati:

Arjun Ghanvati is composed of 'Divya-Arjuna-Kwath' is extracted from the bark extract of Terminalia arjuna (Roxb. ex DC.) Wight & Arn. (TAE). TAE produces negative inotropic and chronotropic cardiac effects and supports in recovery from cardiac arrhythmia. The plant extract contains a plethora of phytochemicals and micronutrients that produce protective effect on cardiac morbidities. In TAE (per gram), phytochemicals quantification by HPLC showed the ellagic acid (1.76 mg); arjungenin (2.43 mg); arjunic acid (4.02 mg); gallic acid (0.32 mg); and catechin (0.34 mg) as shown in Fig. 1.

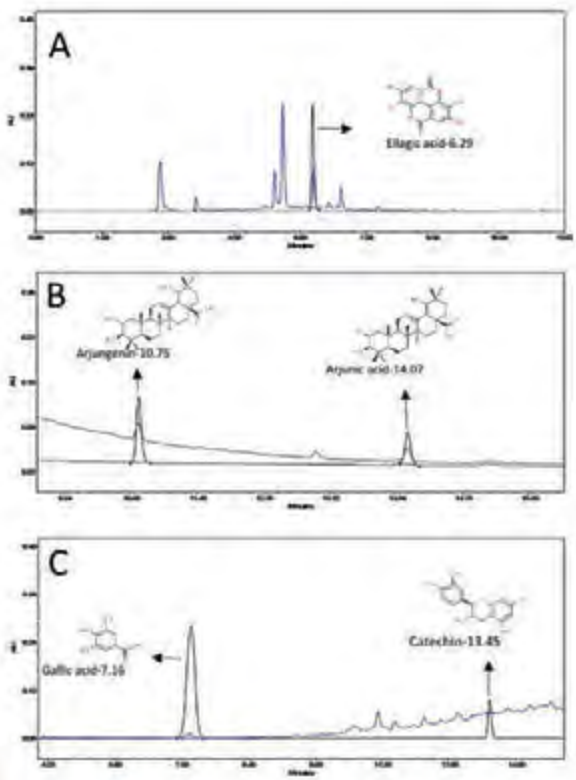


Fig. 1. HPLC-based Phytochemically analysis of TAE. The compounds in TAE were A) ellagic acid (365 nm wavelength); B) arjunentin and arjunic acid (210 nm wavelength); and C) gallic acid and catechin (270 nm wavelength). In the chromatograms, the black line represents standards for phytochemicals and the blue line represents phytochemicals identified in test samples.

Treatment of H9c2 cells with ISP showed a significant concentration dependent loss of cell viability at 24 and 48 h, as shown in Fig. 2A. Inhibition concentration of 50% (IC50) for ISP in the H9c2 cells was determined at 145.2 µM and 98 µM at 24 h and 48 h treatments, respectively. TAE did not induce any cell viability loss in the H9c2 cells at 24 and 48 h and showed an IC50 value of >1000 µg/mL, as shown in Fig. 2B.

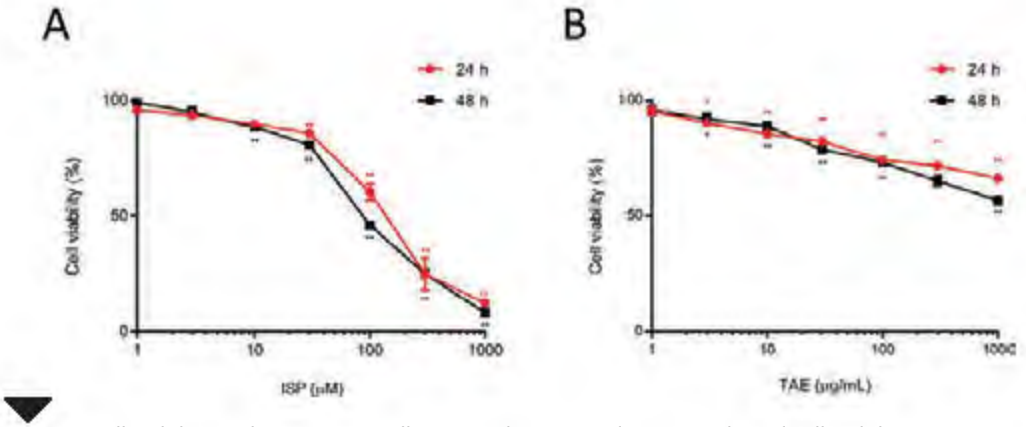
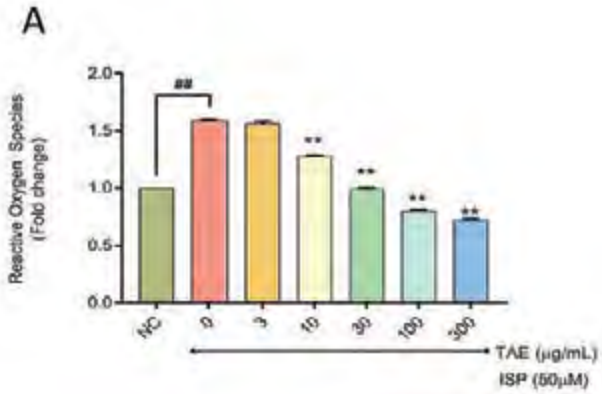
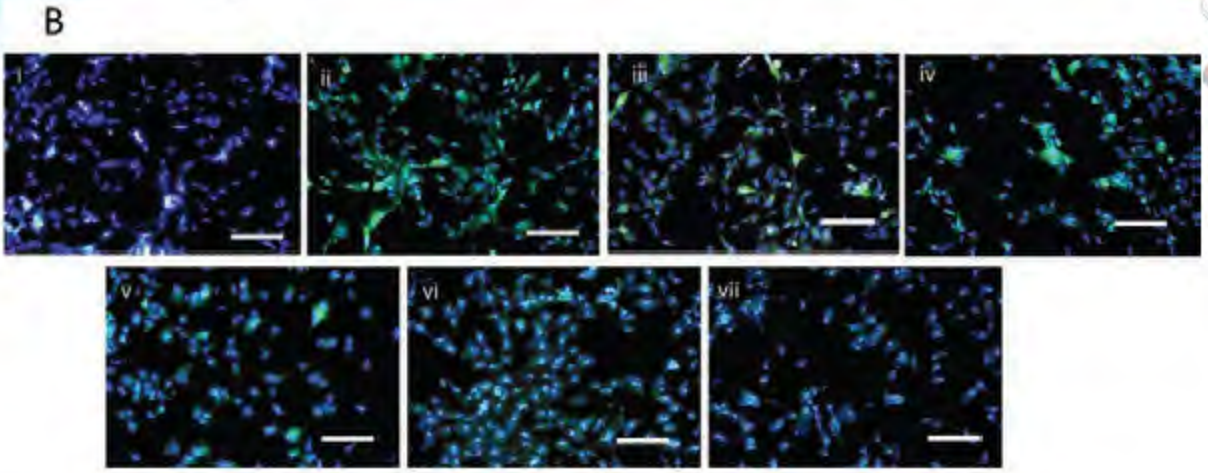


Fig. 2. Cell viability analysis in H9c2 cells exposed to ISP, and TAE. MTT-based cell viability assay was performed for H9c2 cells exposed to A) ISP, and B) TAE for 24 and 48 h durations. All the experiments were performed thrice in triplicate. Results represent Mean ± SD. Statistical analysis was performed using one-way ANOVA followed by Tukey's post-hoc test. p-value * < 0.05 and * * < 0.01 (Control *versus* treatment).

Treatment of H9c2 cells with ISP for 24 h induced a significant (p- value < 0.01) 1.6 folds' increase in the intracellular generation of reactive oxygen species (ROS), as shown in Fig. 3A. Concurrent treatment of the ISP-stimulated H9c2 cells with TAE significantly (p-value < 0.01) inhibited the ROS generation in a concentration-dependent manner, as shown in Fig. 3A. Fluorescence microscopy of H9c2 cells further confirmed the dose-dependent antioxidant behavior of TAE, as shown in Fig. 3B. ISP also stimulated a significant (p-value < 0.01) increase (2.2 folds) in the mitochondrial membrane potential (MMP) of H9c2 cells that was ameliorated following co-treatment with varying concentrations of TAE, as shown in Fig. 3C.





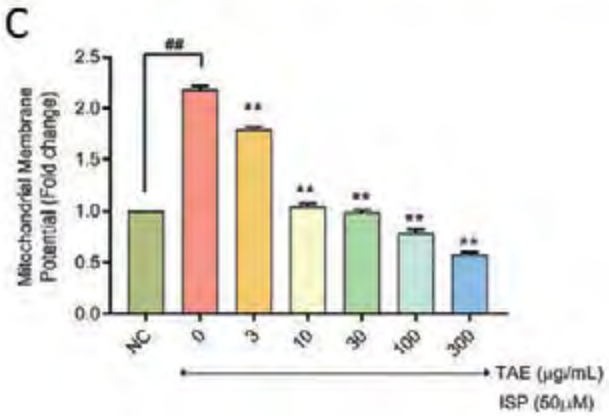


Fig. 3. Oxidative stress and mitochondrial membrane potential modulation in H9c2 cells. Reactive oxygen species generation was analyzed in ISP (50 µM)- stimulated H9c2 cells followed by varying concentrations of A) TAE co-treatments. B) Fluorescence microscopy was performed with ISP (50 µM)-stimulated H9c2 cells treatment conditions- (i) Control, (ii) ISP-alone, (iii) ISP + TAE (3 µg/mL), (iv) ISP + TAE (10 µg/mL), (v) ISP + TAE (30 µg/mL), (vi) ISP + TAE (100 µg/mL), (vii) ISP + TAE (300 µg/mL). C) Mitochondrial membrane potential was analyzed in the H9c2 cells stimulated with ISP (50 µM) and co-treated with varying concentrations of TAE. Scale bar in images represent 50 µm. All the experiments were performed thrice in triplicate and represented by Mean ± SD. One-way ANOVA followed by Tukey's post-hoc test was performed. p-value ** < 0.01 (ISP versus control) and ## < 0.01 (Co-treatment versus ISP alone).

When H9c2 cells treated in the presence of ISP then Superoxide dismutase (SOD) enzyme level was significantly (p-value < 0.01) reduced, as shown in Fig. 4A. Treatment of the ISP-stimulated cells with TAE significantly (p-value < 0.01) recovered the SOD enzyme levels, as shown in Fig. 4A. Catalase enzyme levels were also reduced in the ISP-treated H9c2 cells that were significantly recovered following treatment with TAE, as shown in Fig. 4B.

H9c2 cells showed overexpression of cardiac remodeling genes- alpha actin-1 (ACTC-1) and atrial natriuretic factor (ANF) indicating stimulation of cellular structural changes associated with the onset of CH following treatment with ISP, as shown in Figs. 5A and 5B. Co-treatment with TAE significantly (p-value < 0.01) reduced the ACTC-1 and ANF mRNA expression levels in the ISP–stimulated H9c2 cells, as shown in Figs. 5A and 5B. ISP treatment also stimulated the expression of in- jury biomarker genes-cardiolipin (CRLS-1), troponin I (TNNI), and troponin T (TNNT) in the H9c2 cells, as shown in Figs. 5C-5E). ISP-stimulated increase in gene expressions were significantly (p-value < 0.01) reduced following co-treatment with TAE, as shown in Figs. 5C- 5E.

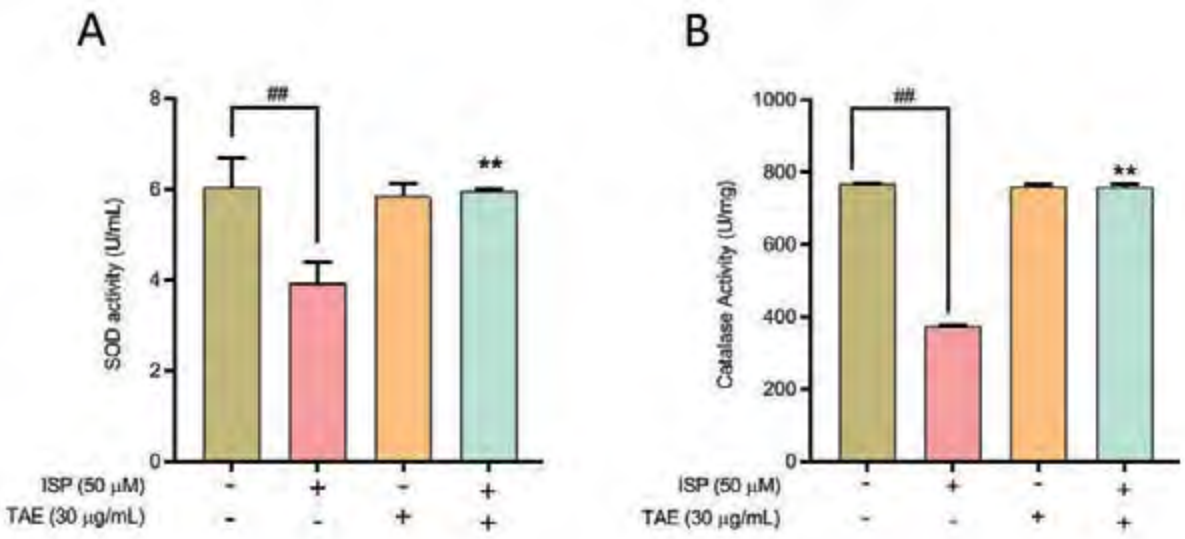


Fig. 4. Modulation of cellular antioxidants levels in H9c2 cells. (A) Superoxide dismutase (SOD) and (B) catalase enzymes were quantified in the H9c2 cells following ISP, and TAE treatments. All the experiments were performed thrice in triplicate and represented by Mean ± SD.

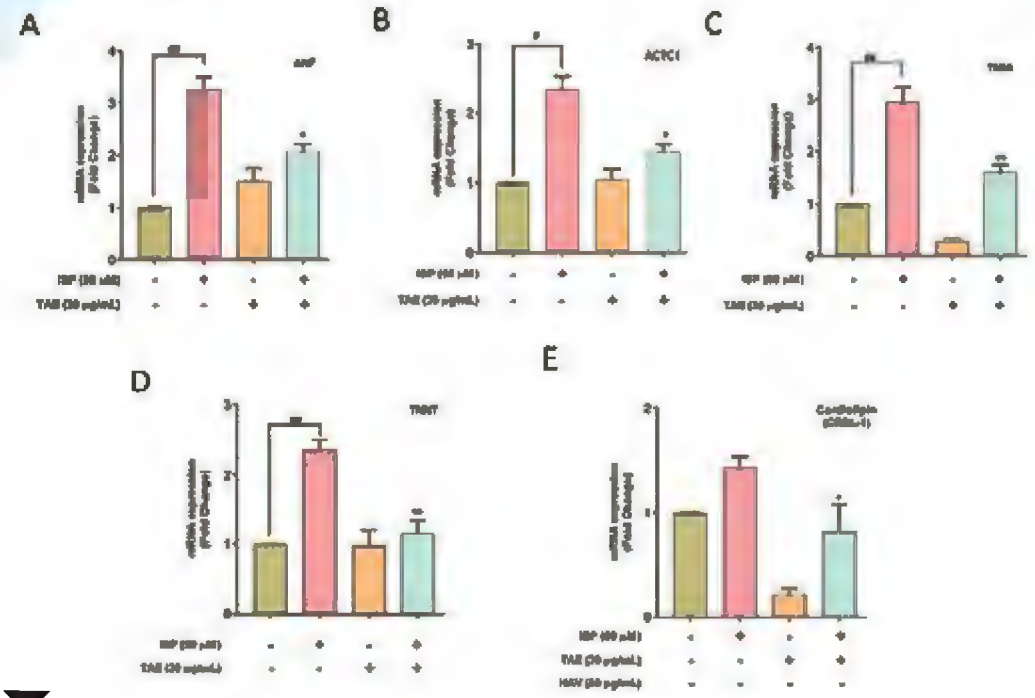


Fig. 5. Modulation of the cardiac remodeling and tissue injury biomarker genes in H9c2 cells. TAE co-treatment modulated the mRNA expression of (A) atrial natriuretic factor (ANF), (B) alpha actin-1 (ACTC1), (C) troponin I (TNNI), (D) troponin T (TNNT), and (E) cardiolipin (CRLS-1) in ISP-stimulated H9c2 cells. All the experiments were performed twice in duplicates. Results represent Mean ± SD. One-way ANOVA followed by Tukey's post-hoc test was performed. p-value # < 0.05; ** < 0.01 (ISP versus control) and ** < 0.01 (Co-treatments versus ISP-alone).

Dose and Method of Use of Arjun Ghanvati:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://www.sciencedirect.com/science/article/pii/S2667031321000567?via%3Dihub

Tablet

CARDIOGRIT GOLD
कार्डियोग्रिट गोल्ड

Introduction to Cardiovascular Diseases:

Cardiac disorders are conditions that affect the heart and blood arteries. Depending on the nature and degree of the condition, they can produce a variety of symptoms and problems. The following sections go through some of the most frequent forms of heart disease.

Coronary artery disease is a disorder in which the arteries supplying blood to the heart muscle narrow or get clogged by fatty deposits known as plaque. This lowers blood supply to the heart, which can result in chest discomfort (angina), shortness of breath, an irregular heartbeat (arrhythmia), or a heart attack.

This is a condition in which the heart beats excessively quickly, slowly, or erratically. This can impair the heart's pumping efficiency and result in symptoms such as palpitations, dizziness, fainting, chest discomfort, or shortness of breath. Atrial fibrillation, ventricular tachycardia, bradycardia, and heart block are all examples of frequent arrhythmias.

Atrial fibrillation, ventricular tachycardia, bradycardia, and heart block are all examples of frequent arrhythmias. This is a condition in which one or more of the four heart valves do not open or shut appropriately. This can impair blood flow through the heart, resulting in symptoms including weariness, edema, shortness of breath, chest discomfort, or heart failure. Aortic stenosis, mitral regurgitation, and mitral stenosis are three prevalent kinds of heart valve disease.

Heart failure occurs when the heart is unable to pump enough blood to fulfil the body's demands. Symptoms include weariness, edema, shortness of breath, coughing, weight gain, and loss of appetite. Heart failure can be caused by a variety of conditions, including coronary artery disease, excessive blood pressure, diabetes, cardiomyopathy, and valvular disease.

Congenital Heart Disease is a disorder in which the heart or blood arteries do not develop properly before birth. This can impair blood flow through the heart, resulting in symptoms such as cyanosis (bluish skin), trouble breathing, poor growth or development, and heart failure. Atrial septal defect, ventricular septal defect, patent ductus arteriosus, and tetralogy of Fallot are some frequent kinds of congenital cardiac disease.

Peripheral Arterial Disease is a disorder in which the arteries that deliver blood to the limbs constrict or get clogged by plaque. This lowers blood flow to the legs and feet, which can result in symptoms including discomfort, cramps, numbness, coldness, or ulcers. Peripheral

Arterial Diseases increases the likelihood of infection, gangrene, and amputation.

Aortic illness occurs when the aorta (the primary artery that connects the heart to the rest of the body) becomes weaker, swollen, or damaged. Symptoms include chest discomfort, back pain, stomach pain, and rupture. Aortic disease can be caused by a number of reasons, including excessive blood pressure, ageing, heredity, and trauma.

A stroke is a condition in which the blood flow to a portion of the brain is cut off by a clot or a haemorrhage. This can result in symptoms such as abrupt weakness, numbness, disorientation, speech difficulties, visual difficulties, or loss of consciousness. High blood pressure, diabetes, smoking, and atrial fibrillation are all risk factors for stroke.

Ingredients and Medicinal Uses of Cardiogrit Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Fine Powder of:				
Akik Pishti	Classical Preparation	Hridya-Daurbalya Har, Hridya	• Alleviates weakness of heart • Cardiotonic	79 mg
Sangeysav Pishti	Classical Preparation	Hridyarog, Mastishkdaurbalya Har	• Alleviates heart diseases • Alleviates weakness of brain	79 mg
Jaharmohra Pishti	Classical Preparation	Chardi, Daha, Visucika Har, Hridya Vikarshamak	• Alleviate vomiting • burning sensation and diarrhea • Alleviates heart diseases	79 mg
Moti Pishti	Classical Preparation	Somya, Dahsamak, Pittaj Vikar Har, Hridya	• Alleviates burning sensation • Alleviates diseases due to imbalance of pitta • Cardiotonic	16 mg
Yogendra Rasa	Classical Preparation	Hridyabalya, Shulaghna	• Cardiotonic • Pain-relieving	9 mg
Dry Extract of:				
Arjun (Bk.)	*Terminalia arjuna*	Medohar, Hridya	• Alleviates lipid disorders • Cardiotonic	198 mg

Cardiogrit Gold is Useful in:

- **Cardiovascular Diseases**
- **Cardioprotection**

Cardiogrit Gold: Description in Classical Texts:

Cardiogrit gold is an Ayurvedic Proprietary medicine which is useful in cardiac diseases. Akik pishti is prepared by taking finely powdered suddha akik and grinding it with rose water for 21 days continuously and filtering through a fine cloth. It is dried and stored well. This is very effective in cardiac diseases.

Sangeysav pishti is prepared by grinding sangeysav powder with gulab ark for 5 days. This is also very effective in cardiac diseases. Jaharmohra pishti is prepared by taking good quality jaharmohra pieces, washed and dried and ground with gulab jal or chandanadi ark. This pishti is neither hot nor cold in potency and hence suitable in all conditions. It gives strength to heart.

Moti pishti is helpful in pittaj vikar. It reduces the burning sensation and can be given with honey, and buttermilk. Yogendra Rasa is useful in polyuria, diabetes, vataroga, vatapitta roga, murchha, tuberculosis, hyperacidity and stomachache. It can be given with triphala kwath or honey.

Scientific Evidence of Cardiogrit Gold:

Cardiogrit tablet was characterized by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. During the analysis of Cardiogrit tablet, different marker compounds were obtained mainly at 365 nm wavelength ellagic acid at 14.68 minutes; at 210 nm wavelength arjungenin at 29.01 minutes and arjunic acid at 34.78 minutes, as shown in Fig. 1. In the chromatograms, the blue line shows the standards and pink line represents the test sample.

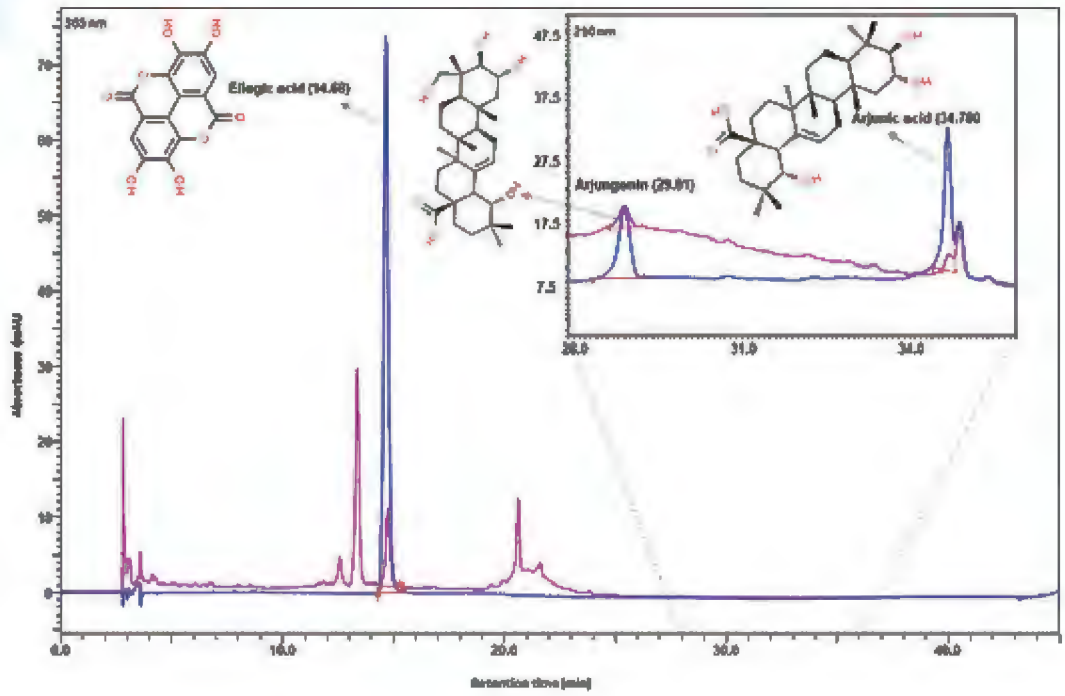


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Cardiogrit tablet. In Cardiogrit tablet, the compounds were observed ellagic acid (14.68 minutes) at 365 nm wavelength; arjungenin (29.01 minutes) and arjunic acid (34.78 minutes) at 210 nm wavelength. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of Cardiogrit Gold:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

Tablet

HRIDYAMRIT VATI EXTRA POWER

हृदयामृत वटी एक्स्ट्रा पॉवर

Introduction to Cardioprotection:

Cardioprotection refers to the strategies and interventions aimed at preventing or minimizing heart damage caused by various cardiovascular diseases and events, such as heart attacks and ischemia-reperfusion injury. The goal of cardioprotection is to preserve the function and structure of the heart, thereby reducing the risk of complications and improving patient outcomes.

There are several approaches to cardioprotection, and they can be broadly categorized into pharmacological and non-pharmacological interventions. Pharmacological interventions include the use of medications that target specific pathways involved in heart injury, while non-pharmacological interventions focus on lifestyle modifications and procedures that improve heart health.

One of the most extensively studied pharmacological approaches to cardioprotection is the use of cardioprotective agents, such as adenosine, nitric oxide donors, and opioids. These agents exert their effects through various mechanisms, including reducing inflammation, decreasing oxidative stress, and modulating cell death pathways. For example, adenosine, a naturally occurring nucleoside, has been shown to protect the heart by attenuating ischemia-reperfusion injury and reducing myocardial infarct size.

Non-pharmacological interventions for cardioprotection include lifestyle modifications such as regular exercise, a healthy diet, and smoking cessation. These interventions help reduce the risk factors associated with cardiovascular disease, such as hypertension, obesity, and hyperlipidemia. Additionally, procedures such as angioplasty and coronary artery bypass graft surgery can restore blood flow to the heart, thereby protecting the myocardium from further damage.

Furthermore, emerging research has focused on novel strategies for cardioprotection, including the use of stem cells and gene therapy. Stem cell-based therapies aim to regenerate damaged cardiac tissue and improve heart function. Gene therapy, on the other hand, involves the delivery of specific genes to the heart to modulate cellular processes involved in heart injury and repair.

In conclusion, cardioprotection encompasses a range of interventions aimed at preserving heart function and reducing heart damage. These approaches include pharmacological agents, lifestyle modifications, and innovative therapies. Further research and clinical trials are necessary to refine and optimize cardioprotective strategies and improve outcomes for patients with cardiovascular diseases.

Cardiovascular problems- Cardiovascular problems refer to a range of conditions that affect the heart and blood vessels, including heart disease, stroke, and high blood pressure. These conditions are a leading cause of morbidity and mortality worldwide. While medical intervention and professional advice are crucial for managing cardiovascular problems, certain lifestyle modifications and remedies can complement traditional treatments and improve overall cardiovascular health.

Here are some remedies that have shown potential in supporting cardiovascular health:

- **Healthy Diet:** A balanced diet rich in fruits, vegetables, whole grains, lean proteins, and healthy fats can promote heart health. The Mediterranean diet, for example, has been associated with a lower risk of heart disease. It emphasizes plant-based foods, fish, olive oil, and limits red meat and processed foods.
- **Regular Exercise:** Engaging in moderate-intensity aerobic activities, such as brisk walking, swimming, or cycling, for at least 150 minutes per week can help improve cardiovascular health. Exercise strengthens the heart, reduces blood pressure, and helps maintain a healthy weight.
- **Stress Management:** Chronic stress can contribute to the development and progression of cardiovascular problems. Techniques such as deep breathing exercises, meditation, yoga, and engaging in hobbies or activities that promote relaxation can help manage stress levels and promote heart health.
- **Smoking Cessation:** Smoking damages the blood vessels and increases the risk of heart disease. Quitting smoking is one of the most significant steps one can take to improve cardiovascular health. Support from healthcare professionals, nicotine replacement therapy, and counseling can aid in the quitting process.
- **Blood Pressure Control:** High blood pressure is a major risk factor for cardiovascular problems. Regular monitoring of blood pressure, adherence to prescribed medications, reducing salt intake, maintaining a healthy weight, and limiting alcohol consumption can help manage blood pressure levels.
- **Cholesterol Management:** High levels of cholesterol in the blood can contribute to the development of plaque in the arteries, increasing the risk of heart disease. A heart-healthy diet low in saturated and trans fats, along with regular exercise and medications prescribed by healthcare professionals, can help manage cholesterol levels.
- **Weight Management:** Maintaining a healthy weight through a combination of a balanced diet and regular exercise can reduce the risk of cardiovascular problems. Even modest weight loss can have significant benefits for heart health.

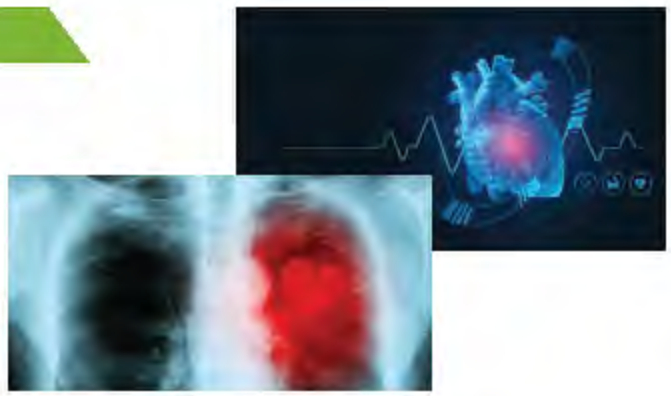
It is important to note that these remedies should be implemented in consultation with healthcare professionals, who can provide personalized advice based on individual health conditions and needs.

Ingredients and Medicinal Uses of Hridyamrit Vati:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extracts of:				
Arjun (Bk.)	*Terminalia arjuna*	Hridyavikar Har	• Helpful in Cardiac diseases	217.63 mg
Makoy (sd.)	*Solanum nigrum*	Hridrog Har	• Helpful in Cardiac diseases	21.77 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Hridrog Har	• Helpful in Cardiac diseases	21.77 mg
Nirgundi (Wl. Pt.)	*Vitex nirgundo*	Shool	• Pain relieving	21.77 mg
Rasna (Wl. Pt.)	*Pluchea lanceolata*	Vedanahara	• Pain relieving	21.77 mg
Giloy (St.)	*Tinospora cordifolia*	Dahahara	• Relieves burning sensation	21.77 mg
Chitrak (Rt.)	*Plumbago zeylanica*	Shoth Har	• Anti-inflammatory	21.77 mg
Nagarmotha (Rt.)	*Cyperus rotundus*	Trishna Har	• Relieves thirst	21.77mg
Vaividang (Sd.)	*Embelia ribes*	Krimi Har	• Alleviates parasitic infections/ Anti-microbial	21.77 mg
Harad chhoti (Fr.)	*Terminalia chebula*	Vibandh Har	• Relieves constipation	21.77 mg
Ashwagandha (Rt.)	*Withania somnifera*	Shoth Har	• Anti-inflammatory	21.77 mg
Pippla mool (Rt.)	*Piper longum*	Kaph Har, Anaha Har, Swas Har	• Pacifies kaphadosha • Relieves abdominal distention • Alleviates asthma	21.77 mg
Fine Powders of:				
Arjun (Bk.)	*Terminalia arjuna*	Hridyavikar Har	• Helpful in Cardiac diseases	13.04 mg
Dalchini (Bk.)	*Cinnamomum zeylanicum*	Vedana Har	• Pain relieving	6.51 mg
Sangeysav pishti	Classical Preparation	Hridayarog Har	• Helpful in Cardiac diseases	1.30 mg
Akik pishti	Classical Preparation	Hridayarog Har	• Helpful in Cardiac diseases	1.30 mg
Praval pishti	Classical Preparation	Hridayarog Har	• Helpful in Cardiac diseases	1.30 mg
Mukta shukti bhasma	Classical Preparation	Shool Har	• Pain relieving	1.30 mg
Jahermohara pishti	Classical Preparation	Hridayarog Har	• Helpful in Cardiac diseases	0.65 mg
Mukta pishti	Classical Preparation	Hridayarog Har	• Helpful in Cardiac diseases	0.33 mg

Hridyamrit Vati is Useful in:

- **Heart Diseases**
- **Cardioprotection**



Hridyamrit Vati: Description in Classical Texts:

Hridyamrit vati is an Ayurvedic Proprietary medicine for use in cardiac diseases. Various effective drugs from Ayurveda are used in this. Arjun comes under Vataadi Varga in bhavprakash nighantu. It has astringent taste, light property with cold potency; and pacifies pitta & kapha doshas. It acts as a cardiac tonic, and is useful in poisoning, blood diseases, obesity, polyuria, ulcer and phthisis.

Makoy is called Kakamachi in Ayurvedic texts and Bhava prakasha has included it under Guduchyadi varga. It has a bitter taste with the properties of lightness and sliminess and pacifies all three doshas. This drug has neither hot, nor cool potency and katu vipaka.

Punarnava is mentioned under Guduchyadi varga in Bhava prakasha. It has sweet, bitter and astringent in taste. It possess the qualities of lightness and dryness. It's vipaka is katu and this drug is hot in potency. It pacifies kapha and vata doshas. It has anti-inflammatory and increases digestive power.

Nirgundi has pungent and bitter tastes with qualities of lightness and dryness. The vipaka is katu and potency is hot. It pacifies vata kapha doshas. Placed under Hareetakyadi varga by Bhava prakasha, Rasna possess bitter taste and heavy quality; with katu vipaka and hot potency. It pacifies kapha and vata doshas.

Giloy extract is pungent, bitter, astringent, in taste. Physical property is lightness. It's vipaka is madhur and this drug is hot in potency. Pacifies vata, pitta, kapha doshas; and helps in alleviating skin diseases, headache, edema, hernia, flatulence, rheumatism, anemia, jaundice, fever.

Chitrak is also mentioned under Hareetakyadi varga by Bhava prakasha. Ayurveda explains that all synonyms of fire hold good for chitrak as well. This is because of its fire-like activity in body. It is pungent in taste with hot potency and katu vipaka. It pacifies vata and kapha doshas.

Nagarmotha has bitter, pungent and astringent tastes with qualities of lightness and dryness

and has cold potency with katu vipaka. It pacifies kapha and pitta doshas. Vaividang has pungent and astringent tastes with qualities of lightness, dryness and sharpnessand has hot potency with katu vipaka. It pacifies kaphavatadoshas.

Harad comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, sour, pungent, bitter, astringent in taste, and hot potency with lightness and dryness properties. It has madhura vipaka. This drug is rejuvenating and strength-promoting.

Bhavaprakasha has included Ashwagandha in Guduchyadi varga. This drug has astringent and bitter taste and madhura vipaka. It pacifies vata and kapha doshas. It gives strength and is rejuvenating also. Pippla Mool has pungent taste with qualities of lightness and dryness and has hot potency with katu vipaka. It pacifie kapha and vata doshas.

Dalchini/twak has been mentioned under Bhava Prakasha- Karpooradi varga. This drug is light in quality, has hot potency, pungent, sweet and bitter tastes. The drug is Ruksha guna (dry in quality). It increases pitta and reduces kaphavata. It reduces itching, anorexia, diseases of heart and kidney/bladder and vatarogas. Praval pishti made by grinding praval (coral) continuously with rose water for two-three days till fine pishti is obtained. It is cold, pacifies pitta dosha and is useful in blood diseases.

Mukta Shukti Bhasma can be used in various heart diseases and blood disorders. It can be given with honey, lemon juice. Jaharmohara pishti acts as a cardiac tonic. It is useful in pitta related disorders and is coolant in action. Mukta pishti is light, cold potency, sweet, and is helpful in pittaj vikar and reduces burning sensation. It can be given with honey or butter milk.

Scientific Evidence of Hridyamrit Vati:

Hridyamrit-Vati (HAV) is a herbo-mineral formulation, comprising of phytochemicals having anti-inflammatory and cardioprotective properties. Hridyamrit-Vati (HAV) was characterized by using HPLC technique. HPLC analysis of HAV (per gram) showed the presence of ellagic acid (14.19 mg); quercetin (0.06 mg); arjungenin (1.63 mg); arjunic acid (0.64 mg); gallic acid (3.91 mg); gallocatechin (0.15 mg); vanillic acid (0.11 mg); and catechin (0.10 mg) as shown in Fig. 1.

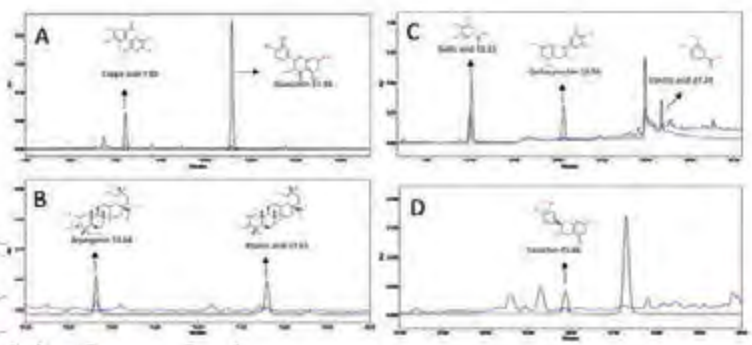


Fig. 1. HPLC-based Phytochemically analysis of the HAV. The different compounds in HAV were A) ellagic acid, and quercetin (at 365 nm wavelength); B) arjunentin, and arjunic acid (at 210 nm wavelength), C) gallic acid, gallocatechin, and vanillic acid (at 210 nm wavelength); and D) catechin (at 270 nm wavelength). In the chromatograms, the black line shows the standards for phytochemicals and the blue line indicates the phytochemicals identified in test samples.

H9c2 cells were treated with ISP which showed a significant concentration dependent loss of cell viability at 24 h and 48 h, as shown in Fig. 2A. In the H9c2 cells, the Inhibition concentration of 50% (IC50) for ISP was determined at 145.2 µM and 98 µM at 24 h and 48 h treatments, respectively. Divya-HridyAmrit-Vati (HAV) did not induce any cell viability loss in the H9c2 cells at 24 and 48 h and showed an IC50 value of >1000 µg/mL, as shown in Fig. 2B.

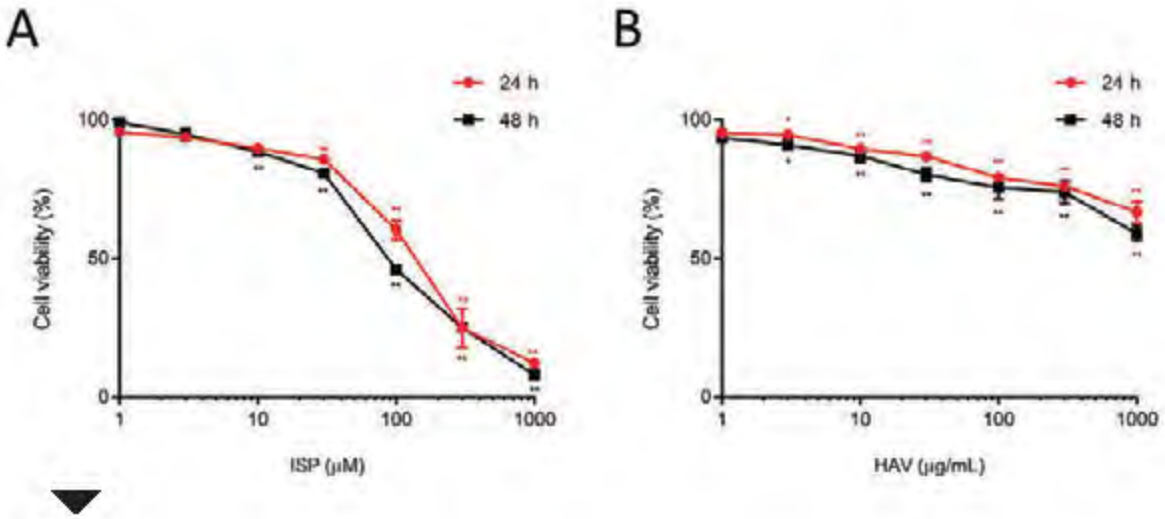


Fig. 2. Cell viability analysis in H9c2 cells exposed to ISP, and HAV. MTT-based cell viability assay was performed for H9c2 cells exposed to A) ISP, and B) HAV for 24 and 48 h durations. All the experiments were performed thrice in triplicate. Results represent Mean ± SD. Statistical analysis was performed using one-way ANOVA followed by Tukey's post-hoc test. p-value * < 0.05 and ** < 0.01 (Control *versus* treatment).

Giemsa-stained H9c2 cells showed an increase in the cell dimension following treatment with ISP that was significantly reduced following co-treatment with HAV, as shown in Fig. 3A. Total cellular protein quantity showed a significant (p-value < 0.01) increase following treatment with ISP and reduction following co-treatments with HAV, as shown in Fig. 3B. ISP-treatment of the H9c2 cells significantly (p-value < 0.01) increased the presence of intracellular O¬-2 represented by the formation of formazan crystals, and presented as NBT stimulation index and blue coloration of the H9c2 cells, as shown in Figs. 4A and 4B. Co-treatment of these ISP- stimulated H9c2 cells with HAV significantly (p-value < 0.01) reduced the formation of O-2, as shown in Figs. 4A and 4B.

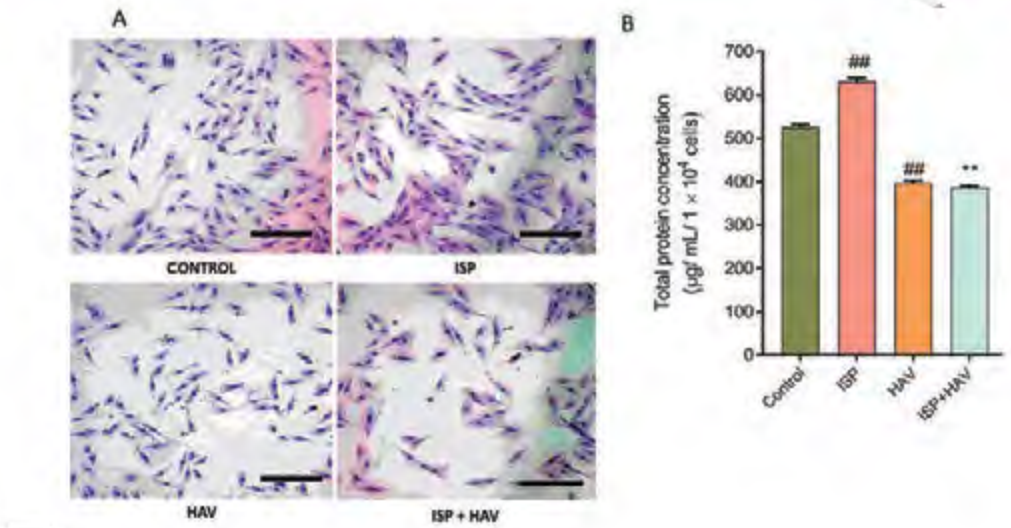


Fig. 3. Hypertrophy induction and recovery in H9c2 cells. (A) Giemsa stained H9c2 cells were analyzed for modulation of CH following treatments with ISP (50 µM), with/without co-treatment of HAV (30 µg/mL). (B) Hypertrophy-associated modulation of intracellular protein content was analyzed using BCA assay in the H9c2 cells. Scale bar represents 50 µm. All the experiments were performed thrice in triplicate and represented as Mean ± SD. One-way ANOVA followed by Tukey's post-hoc test was performed. p-value ## < 0.01 (treatment versus control) and * * < 0.01 (Co-treatment versus ISP-alone).

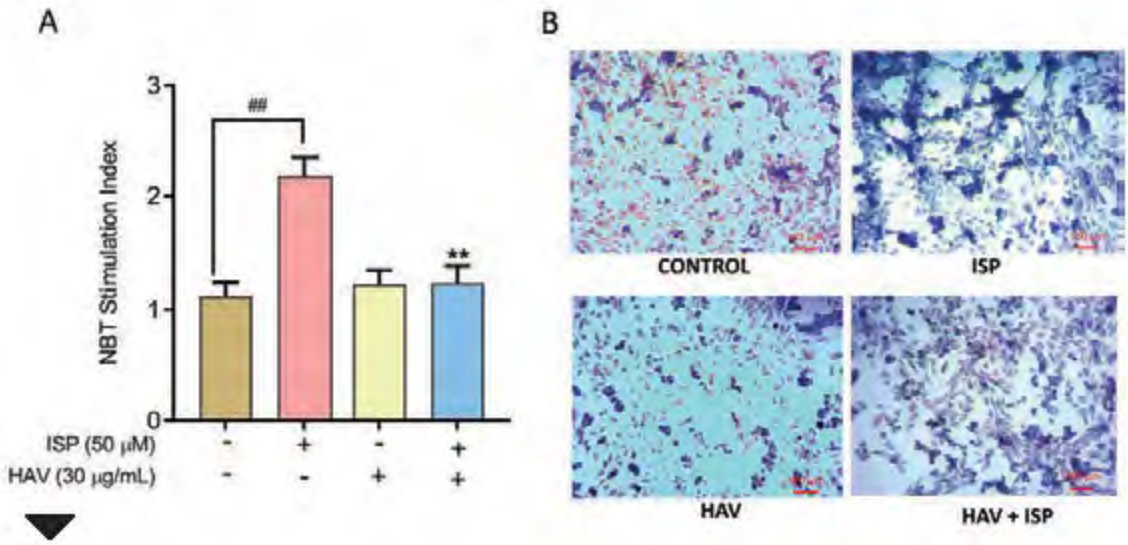


Fig. 4. Superoxide anion (O-2) intonation by HAV the H9c2 cells. Generation of O-2 was analyzed through the formation of formazan crystals in (A) H9c2 cells treated with ISP (50 µM) with/without co-treatment of HAV (30 µg/mL). (B) Visual quantification in H9c2 cells was done using brightfield-light microscopic image analysis following treatment with ISP, and HAV. Scale bar represents 100 µm. Statistical analysis was performed using one-way ANOVA (n = 3) followed by Tukey's post-hoc test. P-value ## < 0.01 (ISP versus normal control) and **< 0.01 (Co-treatments versus ISP-alone).

Superoxide dismutase (SOD) enzyme level was significantly (p-value < 0.01) reduced in the H9c2 cells treated with ISP, as shown in Fig. 5A. Treatment of the ISP-stimulated cells with HAV significantly (p-value < 0.01) recovered the SOD enzyme levels, as shown in Fig. 5A. Catalase enzyme levels were also reduced in the ISP-treated H9c2 cells that were significantly recovered following treatment with HAV, as shown in Fig. 5B.

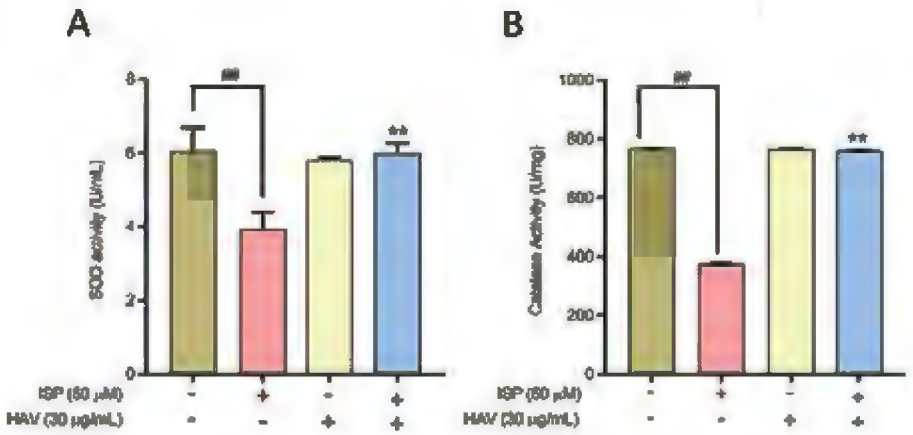


Fig. 5. Modulation of cellular antioxidants levels in H9c2 cells. In the H9c2 cells by using ISP, and HAV, Superoxide dismutase (SOD) (A) and catalase enzymes (B) were quantified. All the experiments were performed thrice in triplicate and represented by Mean ± SD.

Dose and Method of Use of Hridyamrit Vati:

Dose and Frequency	1-2 Tablets, twice a day
Adjuvant	water
Time of Administration	Empty stomach
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://www.sciencedirect.com/science/article/pii/S2667031321000567?via%3Dihub

Tablet

BPGRIT बीपीग्रिट

Introduction to Prehypertension, Hypertension and Cardiac Disorders:

Prehypertension is the term given by the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) in 2003. When blood pressure rises to (120-139/80-89 mm Hg), it is called prehypertension; however, when blood pressure rises to (140/90 mm Hg or higher), it is called hypertension.

Hypertension is a long-term medical condition characterised by persistently elevated blood pressure in the arteries. According to the WHO, hypertension is common in India. By April 2022, more than 2.5 million hypertension patients will be enrolled in over 15 000 health facilities. Prehypertension is associated with heart risk factors; if not treated promptly, it can increase a variety of heart-related risks. Hypertension is the leading cause of coronary heart disease, stroke, and other cardiac disorders. Obesity, unhealthy lifestyle, unhealthy diet, psychological disorder, alcohol, smoking, stress, family history, excessive dietary intake sodium, diabetes mellitus and other risk factors are responsible for hypertension.

Cardiac disorders are a type of heart and blood vessel condition. Unstable angina, heart, attack, heart failure, arrythmia, valve disease etc are involved in cardiac disorder.

Types of hypertensions- There are two types of hypertensions; which are:

- Primary hypertension, also known as essential hypertension, is a type of hypertension. It is most common in young people. The participants in this situation are unaware that they have hypertension.
- Secondary hypertension- It is defined as an increase in blood pressure caused by a specific cause, such as narrowing of the arteries, adrenal gland disease, obstructive sleep apnea, hormones abnormalities, thyroid abnormalities, neurological disorder, medication like contraceptive pills, NASAID, liver cirrhosis.

Stages of hypertension

- Normal- Systolic less than 120 mm Hg, Diastolic less than 80 mm Hg.
- Elevated- Systolic between 120-129 mm Hg, Diastolic less than 80 mm Hg.
- **Stage 1-** Systolic between 130-139 mm Hg, Diastolic between 80-90 mm Hg.
- **Stage 2-** Systolic at least 140 mm Hg, Diastolic at least 90 mm Hg.

Clinical features- High Blood Pressure causes no symptoms, earning it the moniker “silent killer.” Some patients will develop symptoms such as: Severe headache, chest pain, blurred

vision, dizziness, nausea, vomiting, fatigue, shortness of breath, irregular breath.

Complication for uncontrolled hypertension- High blood pressure puts a lot of strain on the arteries, which harm the heart by reducing blood and oxygen circulation in the heart. This can lead to the following problems:

- Chest pain (Angina)
- Heart attack
- Heart failure
- Irregular heart beat

Modern treatment for hypertension- Hypertension is treated with a variety of medications, including: Angiotensin-Converting Enzyme (ACE) inhibitors, Angiotensin II Receptor Blockers (ARBs), Diuretics, Beta-blockers, Calcium channel blockers, Alpha-blockers, Alpha-agonists, Renin inhibitors, Combination medications. Most people with high blood pressure are prescribed diuretics as their first line of treatment.

Ingredients and Medicinal Uses of BPGRIT:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extracts of:				
Arjun (Bk.)	*Termnalia arjuna*	Hridya, Vishaghna	• Cardiotonic • Anti-toxic	150 mg
Gokharu (Fr.)	*Tribulus terrestris*	Mutral, ShothHar	• Diuretic • Anti-inflammatory	100 mg
Anar dana (Fr.)	*Punica granatum*	Hridya, Rochak, Tridosh Shamak	• Cardiotonic • Enhances taste perception • Pacifies all three doshas	100 mg
Lahsun (Bb.)	*Allium sativum*	Hrid Vikar Har, Vibhand Har, Shoth Har	• Cures Cardiac diseases • Cures constipation • Anti-inflammatory	100 mg
Dalchini (Bk.)	*Cinnamomum zeylanica*	Balkarak, Mukh Shosh Har, Vedna Har	• Promotes strength • Alleviates dryness of mouth • Analgesic	50 mg
Fine Powder of:				
Guggul shuddh (Exd.)	*Commiphora mukul*	Medohar, Lekhan	• Cures hyperlipidemia • Has a scraping action on accumulated doshas	100 mg

BPGRIT is Useful in:

- **Pre Hypertension**
- **Hypertension**
- **Cardiac Disorders**

BPGRIT: Description in Classical Texts:

BPGRIT is an Ayurvedic proprietary medicine which is useful in prehypertension, hypertension and in cardiac diseases. Guggulu is mentioned under Karpooradi varga of Bhava prakasha. This drug is Kashaya rasa with Katu vipaka. It has the qualities of dryness and lightness. It has a subtleness in it. It has a rejuvenating activity and pacifies all three doshas. It specifically acts in lipid disorders.

Arjuna is mentioned by Bhava prakasha under Vatadi varga. This drug is known for is cardioprotective activity. It has cool potency. It pacifies kapha and pitta doshas. This drug also helps in maintaining normal lipid levels.

Bhava prakasha mentions Gokshura under Guduchyadi varga. This drug has sweet taste and has madhura vipaka. It promotes strength. It also cures cardiac diseases. It pacifies all three doshas.

Anar dana, called Dadima in Ayurveda, pacifies all three doshas. It has a sweet taste followed by an astringent taste as anurasa. It has unctuous quality.

According to Bhava Prakasha, Lasuna has been mentioned under Hareetakyadi varga. This drug has nourishing effects, and it is unctuous and hot in potency. It hass katu vipaka and lavana varjita pancha rasa- sweet, sour, bitter, astringent and pungent. It increases pitta and rakta. It pacifies vata and kapha doshas.

Dalchini called Twak in Ayurveda, has been explained in Bhava Prakasha- Karpooradi varga. This drug is light in quality. It has pungent, sweet and bitter tastes and has hot potency. The drug is also having Ruksha guna (dry in quality). It increases pitta and reduces kaphavata doshas. It reduces itching, anorexia, diseases of heart and kidney/bladder and vatarogas.

Scientific Evidence of BPGRIT:

Detail phytochemical studies were conducted using reverse phase High Performance Liquid Chromatography (HPLC). BPGRIT analysis confirm the presence of gallic acid, ellagic acid, coumarin, cinnamic acid, guggulsterone E and Z at 254 nm wavelength and catechin at 210 nm wavelength. The sample and standard chromatogram are shown in Fig. 1. The compounds were confirmed by their Ultra Violet (UV) spectra along with comparing with reference samples.

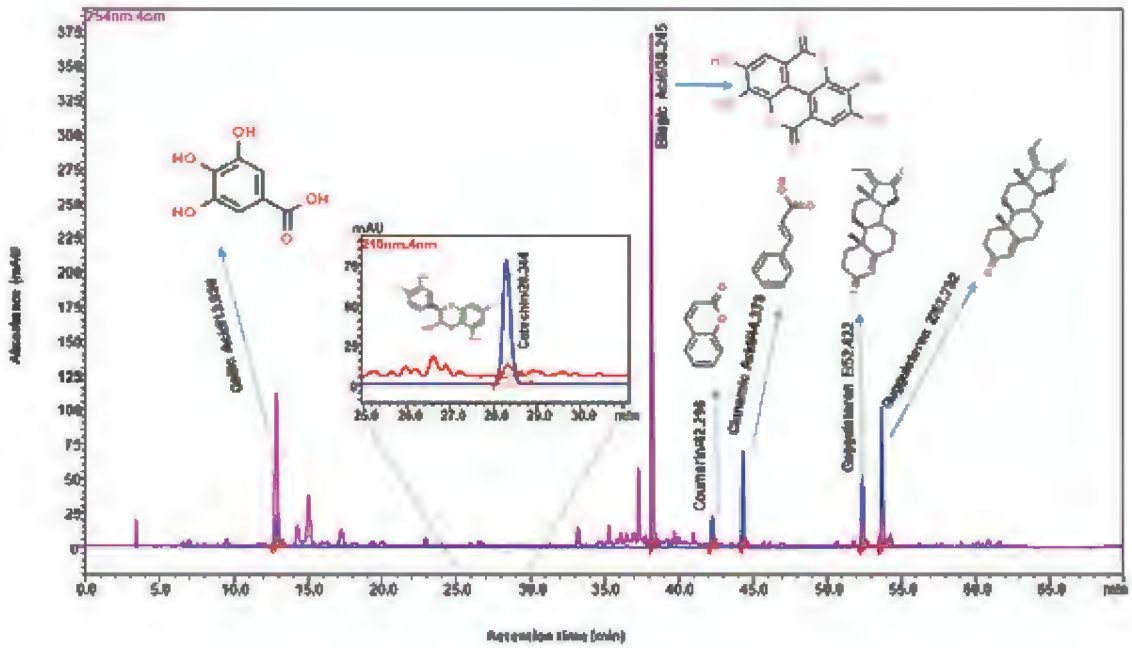


Fig. 1: High Performance Liquid Chromatography (HPLC) analysis confirms the presence of gallic acid, ellagic acid, coumarin, cinnamic acid, guggulsterone E and Z at 254 nm wavelength and catechin at 210 nm wavelength.

Dose and Method of Use of BPGRIT:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

मुक्ता वटी एक्स्ट्रा पॉवर

MUKTA VATI
(Extra Power)

Introduction to Prehypertension, Hypertension and Cardiac Diseases:

Prehypertension refers to a condition in which an individual's blood pressure levels are higher than normal but not yet in the range considered as hypertension. It is often considered a precursor or warning sign of developing hypertension. The classification of prehypertension is defined as systolic blood pressure (SBP) between 120-139 mmHg and diastolic blood pressure (DBP) between 80-89 mmHg. Prehypertension is a significant health concern because individuals with this condition are at an increased risk of developing hypertension, which is a major risk factor for cardiovascular diseases such as heart attacks and strokes. Several factors contribute to the development of prehypertension, including genetics, lifestyle choices, and underlying health conditions such as obesity and diabetes.

Management of prehypertension involves both non-pharmacological and pharmacological approaches. Non-pharmacological interventions focus on lifestyle modifications, including regular physical activity, adopting a healthy diet (such as the DASH diet - Dietary Approaches to Stop Hypertension), reducing sodium intake, limiting alcohol consumption, and quitting smoking. These interventions have been shown to effectively reduce blood pressure levels and the risk of progression to hypertension.In cases where lifestyle modifications are insufficient, pharmacological interventions may be necessary. Medications such as Angiotensin-Converting Enzyme (ACE) inhibitors, Angiotensin II Receptor Blockers (ARBs), Calcium Channel Blockers (CCBs), and thiazide diuretics are commonly prescribed to control blood pressure in individuals with prehypertension. Regular monitoring of blood pressure is crucial for individuals diagnosed with prehypertension, as it allows for early detection of changes in blood pressure levels and prompt adjustments to treatment plans. Hypertension, also known as high blood pressure, is a common medical condition characterized by elevated blood pressure levels persistently exceeding the normal range. It is a significant risk factor for various cardiovascular diseases, including heart disease, stroke, and kidney disease.

Hypertension affects millions of people worldwide and is a major public health concern. There are two types of hypertension: primary (essential) hypertension and secondary hypertension. Primary hypertension is the most common type and has no identifiable cause. It is believed to result from a combination of genetic, environmental, and lifestyle factors. Secondary hypertension, on the other hand, is caused by an underlying medical condition such as kidney disease, hormonal disorders,

or certain medications. Several risk factors contribute to the development of hypertension, including age, family history, obesity, sedentary lifestyle, unhealthy diet (high in sodium and low in potassium), excessive alcohol consumption, and tobacco use. The diagnosis of hypertension is based on multiple blood pressure readings taken on different occasions. The American Heart Association classifies hypertension into several categories based on blood pressure levels: normal (less than 120/80 mmHg), elevated (120-129/less than 80 mmHg), stage 1 hypertension (130-139/80-89 mmHg), and stage 2 hypertension (140/90 mmHg or higher).

The management of hypertension involves lifestyle modifications and, if necessary, pharmacological interventions. Lifestyle changes include adopting a healthy diet, reducing sodium intake, engaging in regular physical activity, maintaining a healthy weight, limiting alcohol consumption, and quitting smoking. If lifestyle modifications are insufficient to control blood pressure, medications such as diuretics, beta-blockers, ACE inhibitors, angiotensin II receptor blockers, calcium channel blockers, or a combination of these may be prescribed.Regular monitoring and management of hypertension are crucial to prevent complications. Untreated or poorly controlled hypertension can lead to serious health consequences, including heart attack, stroke, kidney disease, and heart failure. It is important to work closely with healthcare professionals to develop an individualized treatment plan and maintain blood pressure within the target range. Cardiac disorders refer to a range of conditions that affect the structure and function of the heart. These disorders can be congenital or acquired and may involve abnormalities in the heart's valves, chambers, electrical system, or blood vessels. Common cardiac disorders include coronary artery disease, heart failure, arrhythmias, and congenital heart defects. These conditions can significantly impact cardiovascular health and increase the risk of complications, such as heart attacks and strokes. Diagnosis and management of cardiac disorders typically involve a combination of medical interventions, lifestyle modifications, and surgical procedures. It is essential to consult healthcare professionals for accurate diagnosis and appropriate treatment.

Ingredients and Medicinal Uses of Mukta Vati:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Ganjvan (Wl.Pt.)	*Onosma bracteatum*	Hrdrogahara, Rasayana	• Alleviates heart diseases • Rejuvenating	33.9 mg
Brahmi (Wl. Pt.)	*Bacopa monnieri*	Rasayana, Raktavikarahara	• Rejuvenating • Alleviates blood diseases	67.92 mg
Shankhpushpi (Wl. Pt.)	*Convolvulus pluricaulis*	Rasayana, Vishaghna	• Rejuvenating • Anti-toxic	67.92 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Ghodbach (Rz.)	*Acorus calamus*	Lekhana, Kaphaghna	• Scrape off accumulated doshas • Pacify kapha	33.9 mg
Ashwagandha (Rt.)	*Withania somnifera*	Rasayana	• Rejuvenating	33.9 mg
Malkangni (Sd.)	*Celastrus paniculatus*	Kaphaghna, Uttejaka	• Pacify kapha dosha • Stimulant	33.9 mg
Sounf (Fr.)	*Foeniculun vulgare*	Hrdya, Swasaghna	• Cardiotonic • Alleviates asthma	33.9 mg
Pushkarmool (Rt.)	*Inula recemosa*	Shothaghna	• Anti-inflammatory	33.9 mg
Ustekhuddus (Ifl.)	*Lavandula stoechas*	Shothhar	• Anti-infammatory	33.9 mg
Fine Powder of:				
Jatamansi (Rt./Rz.)	*Nardostachys jatamansi*	Hrdya, Balya	• Cardiotonic • Strengthening	18.65 mg
Sarpgandha (Rt.)	*Rauwolfia serpentina*	Vishaghna	• Anti-toxin	37.3 mg
Mukta Pisthi	Classical Preparation	Pittahara	• Pacifies pitta dosha	20.14 mg

Mukta Vati is Useful in:

- **Prehypertension**
- **Hypertension**
- **Cardiac Diseases**

Mukta Vati: Description in Classical Texts:

Mukta Vati extra power is useful in aiding regulation of blood pression and in heart diseases. Bhavaprakasha has included Ganjvan in Guduchyadi varga. It has sweet and bitter tastes with qualities of lightness and unctuousness; cold potency and madhura vipaka. It pacifies vata and pitta doshas and has cardiotonic property.

Brahmi has bitter, astringent and sweet tastes with quality of lightness; cold potency and madhura vipaka. It pacifies vata and pitta doshas. Shankhpushpihas astringent, pungent and bitter tastes with qualities of unctuousness and heaviness; cold potency and katu vipaka it pacifies all three doshas,

Ghodbach has pungent and bitter tastes with qualities of lightness and sharpness; hot potency and katu vipaka. It pacifies vatakapha doshas. Bhavaprakasha has included Ashwagandha, under Guduchyadi varga, is vatakaphahara in action, having bitter and astringent tastes. It is hot in potency and promotes strength and is rejuvenating as well.

Malkangni has pungent and bitter tastes with the qualities of sharpness, unctuousness and mobility; hot potency and katu vipaka. It pacifies vata and kapha doshas. Sounf has sweet, pungent and bitter tastes with qualities of lightness and dryness; cold potency and madhura vipaka.

Pushkarmool has bitter and pungent tastes with the qualities of dryness and lightness in it; cold potency and katu vipaka. It pacifies kapha and vata doshas. Ustekhuddus has pungent bitter tastes with quality of sharpness and dryness; hot potency and katu vipaka. It pacifies kapha vata doshas.

Jatamansi is bitter astrient in taste with property of lightness; cold potency and katu vipaka. It pacifies all three doshas. Sarpgandha has bitter, astringent and pungent tastes with the quality of dryness; hot potency and katu vipaka. It pacifies kapha vata doshas. Mukta pishti can alleviate mano doshas. It is prepared by taking mukta bhasma and triturate with rosewater. It pacifies pitta dosha.

Scientific Evidence of Mukta Vati:

Mukta Vati was analyzed with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Mukta Vati, the different compounds were obtained mainly gallic acid (7.07 minutes), and rutin (44.25 minutes) at 270 nm wavelength; bacoside A3 (18.32 minutes), bacopside II (18.79 minutes), jujubogenin (20.69 minutes) and bacopasaponin (21.47 minutes) at 205 nm wavelength; chlorogenic acid (23.22 minutes), caffeic acid (25.82 minutes), rosmarinic acid (56.54 minutes), luteolin (63.63 minutes) and apigenin (67.62 minutes) at 325 nm wavelength, as shown in Fig. 1. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

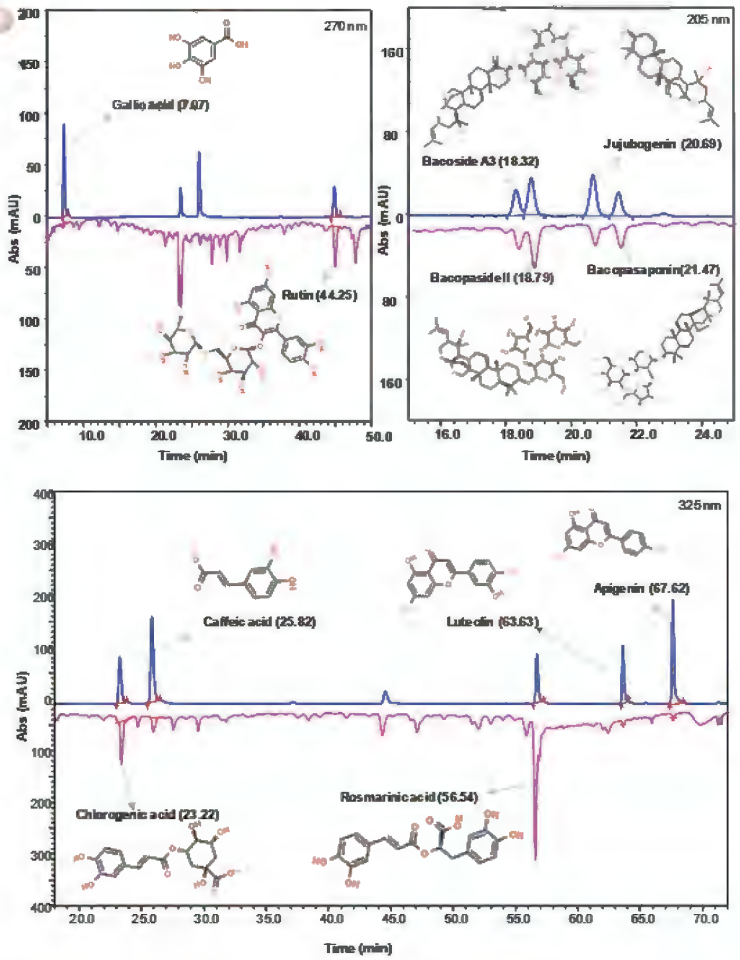


Fig. 1. Analysis of the Mukta Vati by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Mukta Vati, the different compounds were obtained mainly gallic acid (7.07 minutes), rutin (44.25 minutes) at 270 nm wavelength; bacoside A3 (18.32 minutes), bacopside II (18.79 minutes), jujubogenin (20.69 minutes), bacopasaponin (21.47 minutes) at 205 nm wavelength; chlorogenic acid (23.22 minutes), caffeic acid (25.82 minutes), rosmarinic acid (56.54 minutes), luteolin (63.63 minutes), apigenin (67.62 minutes) at 325 nm wavelength. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of Mukta Vati:

Dose and Frequency	1-2 Tablets, twice a day
Adjuvant	Water
Time of Administration	Empty Stomach
Or as directed by the physician.	

Cholo Garlic कोलो गार्लिक PILLS पिल्स

Introduction to Dyslipidemia and Indigestion:

The imbalance of lipids, including triglycerides, high-density lipoprotein (HDL), LDL-C, and cholesterol, is known as dyslipidemia. This illness, which can cause cardiovascular disease with serious consequences, can be caused by unbalanced diet, active and passive smoking, or genetics. To produce steroid hormones, generate bile acids, or provide energy, lipids like cholesterol or triglycerides are absorbed from the intestines and transported throughout the body via lipoproteins. Dyslipidemia can result from an imbalance of these lipid metabolism mediators, which might have organic or nonorganic origins.

Several habits can raise cholesterol levels and have an impact. Examples include smoking, being inactive, eating poorly, and being overweight. Particularly, low diet of fruits, nuts and seeds, vegetables, or excessive consumption of saturated fats are nutrition risk factors. Dyslipidemia can also result from diseases that run in families. Most cases of familial hypercholesterolemia, which results in an increase in LDL-C levels, are caused by autosomal dominant mutations in LDL receptors. Although they are less frequent, other mutations in the cholesterol pathway have been found.The prevalence of dyslipidemia increases with age.

A fasting lipid panel, which includes total cholesterol, LDL, HDL, and triglycerides, is the main test for dyslipidemia. The first line of treatment for dyslipidemia entails lifestyle adjustments. This strategy should incorporate a diet that prioritizes the consumption of fruits, vegetables, and whole grains while adhering to an acceptable calorie intake. Adults should also engage in at least 40 minutes of moderate to strenuous aerobic exercise three to four times per week. Statins that inhibit 3-hydroxy-3-methylglutaryl-coenzyme A (HMG-CoA) reductase are the first-line therapy for dyslipidemia.

A high-intensity statin should be prescribed to patients who have clinically significant atherosclerotic cardiovascular disease, which includes acute coronary syndromes, a history of myocardial infarction, stable or unstable angina, arterial revascularization, and stroke, and who are younger than 75 years of age. Patients with symptomatic atherosclerotic cardiovascular disease who are older than 75 years old should take a moderate-intensity statin. If a patient is between the ages of 40 and 75, has LDL-C that is higher than or equal to 190 mg/dL, or has a history of diabetes and LDL-C that is between 70 and 189 mg/dL, high-intensity statin medication should be started. If a patient is 40 to 75 years old, has

LDL-C between 70 and 189 mg/dL, and has a 10-year atherosclerotic cardiovascular disease more than or equal to 7.5%, they should be on a moderate or high-intensity statin.

When there is a 10-year atherosclerotic cardiovascular disease risk of less than 5% to 7.5%, the administration of a high- or moderate-intensity statin should be discussed with the patient. For primary prevention, a moderate-intensity statin should reduce LDL-C by around 30% to less than 50%, while a high-intensity statin should do so by more than 50%. Atorvastatin 40 or 80 mg and Rosuvastatin 20 mg are examples of high-intensity statins. A few examples of moderate-intensity statins are pravastatin 10 mg, simvastatin 20 mg or 40 mg, atorvastatin 1 mg, and rosuvastatin 10 mg. After starting a high-intensity statin for six weeks, a patient with coronary artery disease defines secondary prevention as having an LDL-C target aim of less than 70 mg/dL. In addition to high-intensity statins, combination treatment should be initiated if this aim is not achieved and LDL-C is noticeably higher than 70. When a patient is not at high risk, the LDL-C target should stay at or below 70 mg/dL.

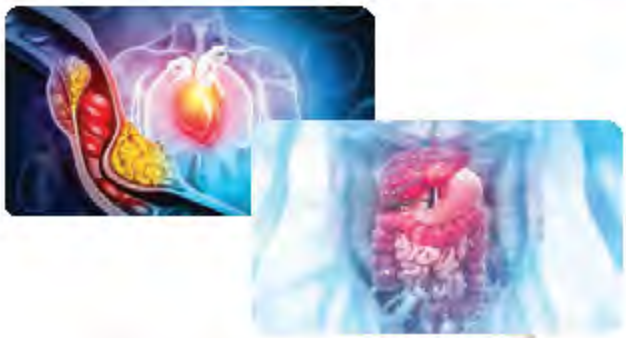
There are now two drug groups that are suggested in conjunction with statin therapy because they have been proved to improve cardiovascular results. Ezetimibe is one among them; it prevents the absorption of cholesterol. When used in conjunction with statin treatment, this medication can reduce LDL-C by an extra 25%. Proprotein convertase subtilisin/kexin type 9 (PCSK9), which controls the LDL receptor, is the focus of another subcategory. LDL receptors are decreased by an increase in PSCK9, which raises blood LDL levels. Monoclonal antibodies called PCSK9 inhibitors bind to PCSK9 and lower LDL-C levels.

Ingredients and Medicinal Uses of Cholo Garlic Pills:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each pill contains
Garlic oil (Bb.)	***Allium sativum***	Hridya, Rasayan, Kupachan Har	• Cardio tonic • Rejuvenating • Alleviate indigestion	25 mg
Sunflower oil (Sd.)	***Helianthus annuus***	Balya	• Strengthening	225 mg

Cholo Garlic Pills is Useful in:

- **Cholesterol Management**
- **Improving Digestion**



Cholo Garlic Pills: Description in Classical Texts:

Cholo garlic pill is an Ayurvedic propritary medicine. According to Bhava Prakasha poorvakhanda, the plant Lasuna/garlic has been explained under Hareetakyadivarga.This drug has nourishing effects, aphrodisiac action, and it is unctuous and hot in nature. It is katupaka and has lavanavarjitapancha rasa- sweet, sour, bitter, astringent and pungent. It increases pitta and rakta.It cures vata and kapha doshas. Sunflower primary purpose is to calm kapha and vata. A substance found throughout the whole plant that has anti-cancer potential is alcohol. It eases body absorption, aids in digestion, and relieves pain. It is an anti-helminthic. Dermatoses and vata problems are cured by it.

Scientific Evidence of Cholo Garlic Pills:

Cholo garlic pills was characterized by using different techniques. HPTLC analysis of Cholo garlic pills showed one dark big spot at 254 nm wavelength by using the mobile phase as hexane : ethyl acetate (8:2::V:V). During the illumination of white light, the Cholo garlic pills analysis showed 6 fluorescent small spots and one big fluorescent spot by using the same mobile phase. So HPTLC fingerprint of Cholo garlic pills showed the bands of phytochemicals in both under 254 nm wavelength as well as white light. This fingerprint is specific for Cholo garlic pills under same chromatographic conditions, as shown in Fig. 1.

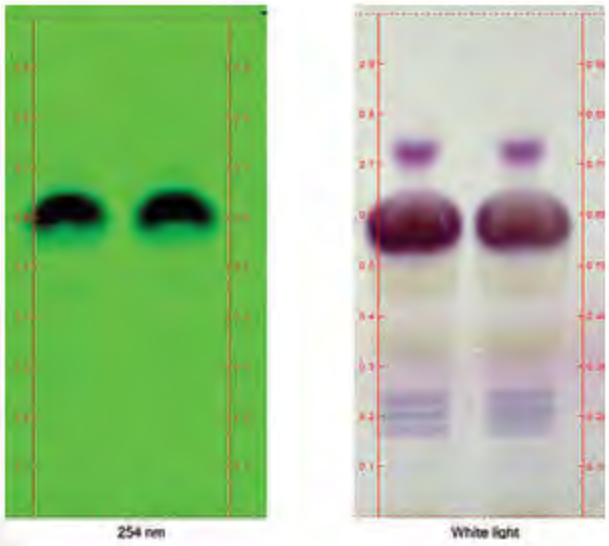


Fig.1. High Performance Thin Layer Chromatography (HPTLC) of Cholo garlic pills, shows one major band at 254 nm wavelength and seven bands at white light after derivatizing.

Cholo garlic pills was analysed with the help of Gas chromatography–mass spectrometry (GC–MS) technique. The GC–MS chromatogram showed the presence of different compounds namely diallylsulfide, diallyldisulfide, trisulfide,di-2-propenyl, and tetrasulfide,di-2-propenyl in the Cholo garlic pills, as shown in Fig. 2.

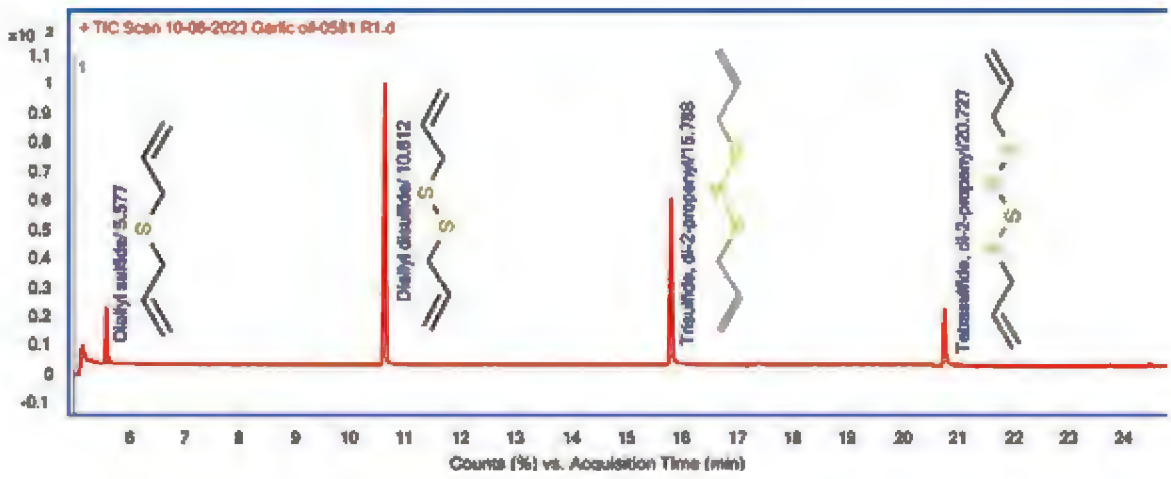


Fig. 2. The GC–MS chromatogram of Cholo garlic pills. The GC–MS chromatogram indicated the presence of diallylsulfide, diallyldisulfide, trisulfide,di-2-propenyl, and tetrasulfide,di-2-propenyl in Cholo garlic pills.

Dose and Method of Use of Cholo Garlic Pills:

Dose and Frequency	2 Pills, twice a day
Adjuvant	Luke warm water
Or as directed by the physician.	

Tablet

LIPIDOM लिपिडोम

Introduction to Dyslipidemia:

Dyslipidemia is the imbalance of lipids such as cholesterol, Low-Density Lipoprotein Cholesterol, (LDL-C), triglycerides, and High-Density Lipoprotein (HDL). This condition can result from diet, tobacco exposure, or genetic and can lead to cardiovascular disease with severe complications. Lipids, such as cholesterol or triglycerides, are absorbed from the intestines and are carried throughout the body via lipoproteins for energy, steroid production, or bile acid formation. An imbalance of such lipid metabolism mediators either from organic or nonorganic causes, can lead to dyslipidemia.

Ingredients and Medicinal Uses of Lipidom:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Arjun (Bk.)	*Terminalia arjuna*	Medo Har, Hridya	• Reduces dyslipidemia • Cardio tonic	170 mg
Lasun (Bb.)	*Allium sativum*	Hridya, Rasayan, Kupachan Har	• Cardio tonic • Rejuvenating • Alleviate indigestion	40 mg
Dalchini (St. Bk.)	*Cinnamomum verum*	Uttejak, Aampachak, Vedana Har	• Stimulant • Digests undigested metabolic residues • Analgesic	40 mg
Guggul (Exd.)	*Commiphora wightii*	Shoth-vedana Har, Medorog Har	• Removes inflammation and pain • Reduces dyslipidemia	40 mg
Lauki (Wl. Pt.)	*Lagenaria siceraria*	Raktshodhak, Hridya, Rochak	• Blood purifier • Cardio tonic • Improves taste sensation	170 mg

Lipidom is Useful in:

- **Medorog (Lipid Imbalance)**
- **Fat Metabolism**
- **Dyslipidemia**
- **Reducing Bad Cholesterol**

Lipidom: Description in Classical Texts:

Lipidom has been formulated as per the knowledge of traditional Ayurvedic herbs used in the treatment of Medoroga particularly in lipid disorders. Plant extracts used here are practically used in many potent Ayurvedic classical medicines individually or in combination with other herbs for action toward dyslipidemia, fat metabolism and reducing bad cholesterol.

According to Bhava Prakasha Poorvakhanda Prathama bhaga Mishra prakarana, the plant Arjuna has been explained under vatadi varga. It is cold in potency and possess cardio tonic activity. It works well in conditions like Toxins, Blood disorders, Dyslipidemia, Diabetes and wounds as well. The drug is kaphapittahara in action.

According to Bhava Prakasha poorvakhanda Prathama bhaga Mishra prakarana, the plant Lasuna has been explained under Hareetakyadi varga. This drug has nourishing effects, aphrodisiac action, and it is unctuous and hot in nature. It is katupaka and has lavana varjita pancha rasa- sweet, sour, bitter, astringent and pungent. It increases pitta and rakta. It cures vata and kapha doshas.

Twak/dalchini has been mentioned under Bhava Prakasha- Karpooradi varga. This drug is light in quality, has hot potency, pungent, sweet and bitter tastes. The drug is Ruksha guna (dry in quality). It increases pitta and reduces kaphavata. It reduces itching, anorexia, diseases of heart and kidney/ bladder and vatarogas.

Guggulu has also been mentioned under Bhava prakasha- Karpooradi varga. Guggulu is clarifying in action and is hot in potency. It has the potential to treat dyslipidemia, diabetes, arthritis, skin diseases and vatarogas. The drug alleviates vata by its sweetness, pitta by its astringent property and kapha by its bitter qualities. Hence, this drug is able to cure all three doshas.

Bhavaprakasha mentioned lauki under Shakavarga. This drug is cold in potency. It is cardio tonic. It can cure cough caused by pitta, toxins and vatapitta jwara. It has bitter taste and katu vipaka.

Scientific Evidence of Lipidom:

Patanjali Research Foundation has done extensive research on this particular medicine to understand its pharmacological effects using different experimental models.

The Lipidom was evaluated for cell safety, IL-1β and MCP-1 release, NLRP3 pathway modulation, NFκB activity, ROS generation, lipid accumulation and gene expression in THP1 macrophages.

In addition, Lipidom treatment was also evaluated on 3 strains of *Caenorhabditis elegans (C. elegans)* (N2, CF1553 and TJ356). The study conducted evaluation of brood size, adult (%), lipid accumulation, triglyceride levels, SOD-3 GFP signal, MDA formation, DAF-16 nuclear translocation and gene expression was performed in *C. elegans* model. Treatment with Lipidom significantly reduced the inflammatory mediators, lipid accumulation, oxidative stress and normalized genes involved in foamy macrophage development. The schematic experiment and parameters evaluated in nematodes are shown in Fig 1.

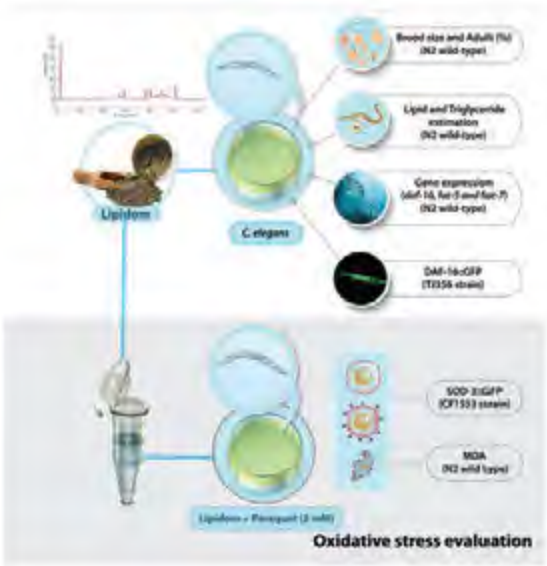


Fig. 1. Schematic representation of study conducted on efficacy of Lipidom at Patanjali Research Institute on *C. elegans.*

Phytochemical evaluation of Lipidom was conducted on Ultra High Performance Liquid Chromatography (UHPLC) using Photo Diode Array Detector (PDA). Quantitative evaluation

confirmed the presence of gallic acid, protocatechuic acid, corilagin, ellagic acid, cinnamic acid at 270 nm wavelength and Guggulsterone E and Guggulsterone Z at 240 nm. The comparative UHPLC fingerprinting of reference standard and sample are shown in Fig 2. Lipidom was found to be cytosafe in THP1 macrophages up to 1000 µg/ml. Treatment with atorvastatin at concentrations of 80 and 160 µM showed a significant decrease in cell viability.

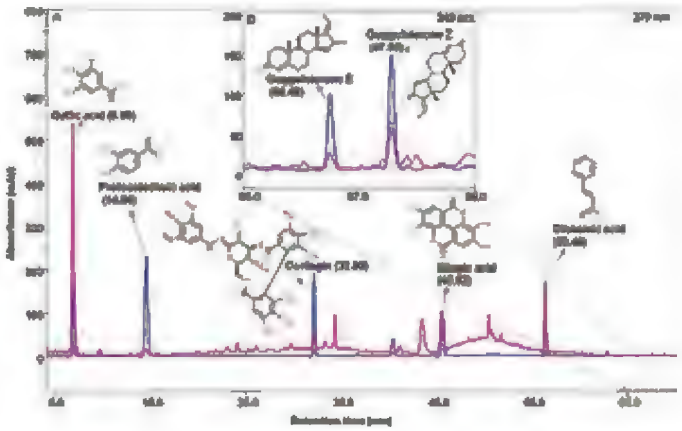


Fig. 2. Phytochemical analysis of Lipidom by UHPLC using PDA detector. Overlap chromatogram of standard mix (blue line) and Lipidom (pink line) confirms the presence of gallic acid, protocatechuic acid, corilagin, ellagic acid, cinnamic acid at 270 nm wavelength and Guggulsterone E and Guggulsterone Z at 240 nm

The effect of Lipidom on inflammatory mediators was also studied. Treatment with Lipidom significantly reduced release of IL-1β and MCP-1 from OxLDL-induced THP1 macrophages. The significant reduction of IL-1β cytokine release induced by LPS and ATP in this study suggests the involvement of Lipidom in modulating inflammation by the NLRP3 pathway. Lipidom treatment also inhibited NFκB activity induced by TNF-α. Fluorescence microscopic images revealed reduction in ROS generation and lipid accumulation in OxLDL-induced THP1 cells with Lipidom treatment. Relative ROS levels were also found to be reduced in a concentration-dependent manner with Lipidom treatment. The amount of MDA levels in the cells indicate significant reduction in lipid peroxide levels. Details are as shown in Fig. 3A, 3B and 3C.

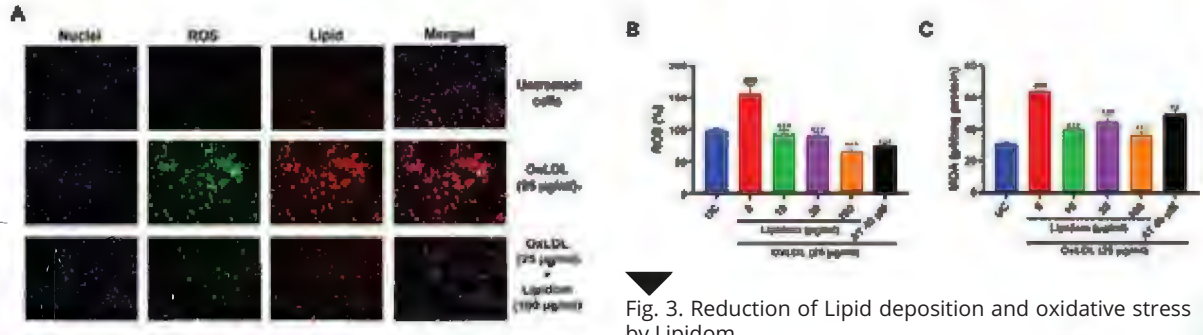


Fig. 3. Reduction of Lipid deposition and oxidative stress by Lipidom.

Lipidom-treated cells showed modulation of the expression levels of genes responsible for chronic inflammation and foam cell formation. Genes namely TNF-α, MCP-1, NLRP3, Nrf2, HO-1, caspase-1, ABCG1, FAS, FGF21 and TRPV4 were significantly modulated in a concentration-dependent manner by Lipidom.

In the in vivo model, accumulation of lipids and triglycerides were significantly reduced without affecting the reproduction and growth. These were assessed by the brood size and adult (%) in *C. elegans*. These results suggest its capability to modulate lipid metabolism without harming the normal growth and reproduction cycle of *C. elegans*. In paraquat-stimulated *C. elegans,* Lipidom treatment raised SOD-3 GFP signal significantly.

Lipidom enhanced the expression levels daf-16, and supported the decrease of oxidative stress inside the nematode. Furthermore, it also reduced the levels of fat-5 and fat-7 responsible for the production of unsaturated fatty acids and lipid accumulation as shown in Fig. 4

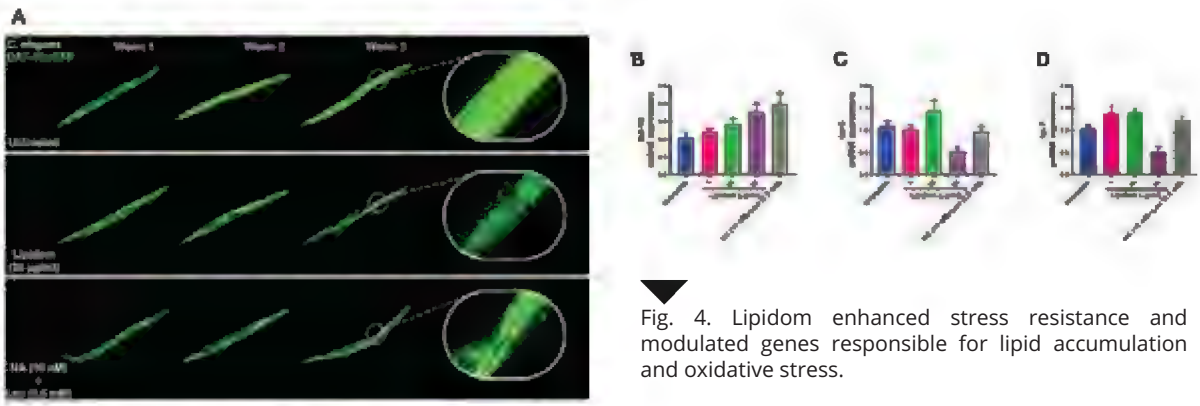


Fig. 4. Lipidom enhanced stress resistance and modulated genes responsible for lipid accumulation and oxidative stress.

Dose and Method of Use of Lipidom:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://www.frontiersin.org/articles/10.3389/fendo.2022.1064532/full

Tablet

ACIDOGRIT एसिडोग्रिट

Introduction to Hyperacidity and Related Disorders:

An excessive amount of stomach acid is known as hyperacidity. It is a typical digestive condition characterised by an increased secretion of hydrochloric acid (HCl) by the gastric glands in the stomach. Regurgitation, heartburn, peptic ulcers, and indigestion are just a few of the signs of hyperacidity. This syndrome is frequently brought on by underlying medical disorders, specific drugs, stress, eating habits, and lifestyle factors.

Regurgitation is the involuntary reflux of stomach contents into the oesophagus and possibly the mouth. The lower esophageal sphincter (LES), a muscle ring that divides the oesophagus from the stomach, relaxes, which causes it to happen. When the LES malfunctions, stomach acid and partially digested food can flow back into the oesophagus, leaving a sour or bitter taste in the mouth. Regurgitation frequently happens after meals and may be accompanied by a burning sensation in the chest.

Heartburn, sometimes referred to as acid indigestion, is a typical sign of hyperacidity. It is characterised by a burning sensation in the upper abdomen, behind the breastbone, or in the chest. When stomach acid irritates the lining of the oesophagus, it can cause irritation and discomfort, which is known as heartburn. After meals, people frequently feel this sensation, especially while bending over or resting down. Chronic heartburn may be a sign of Gastro-Esophageal Reflux Disease (GERD), a more serious condition that calls for medical treatment.

Peptic ulcers are open sores that form on the lining of the stomach, upper small intestine, or oesophagus. These ulcers develop when the protective mucus lining of the digestive tract is worn away, allowing the acid and digestive juices to harm the underlying tissue. Peptic ulcers can be exacerbated by hyperacidity, especially when the bacteria *Helicobacter pylori*, which is frequently linked to these ulcers, is present. Abdominal discomfort, bloating, nausea, and vomiting are the primary signs and symptoms of peptic ulcers. To avoid complications like bleeding or ulcer perforation, prompt diagnosis and treatment are crucial.

Dyspepsia, another name for indigestion, is a word for a collection of symptoms that appear in the upper abdomen during or after meals. Bloating, an uncomfortable feeling of fullness, and an early satiety are its defining characteristics. Hyperacidity, overeating, fatty or spicy foods, excessive alcohol intake,

and smoking are only a few of the causes of indigestion. Indigestion can also be caused by stress and some drugs. Even though indigestion is frequently a transient and unproblematic illness, persistent or severe symptoms should be assessed by a healthcare provider to rule out underlying diseases.

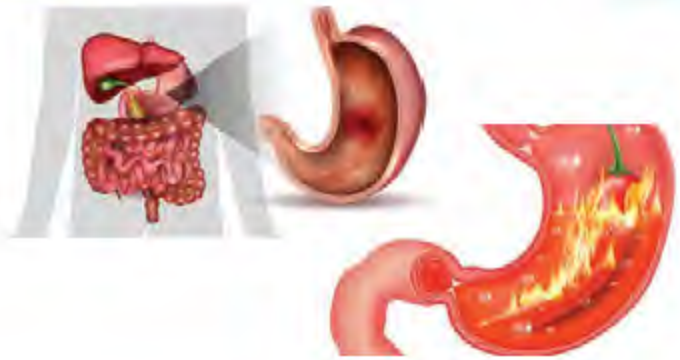
Usually, dietary adjustments, medication, and lifestyle changes are used to treat hyperacidity and the symptoms that go along with it. Foods and drinks that cause hyperacidity, including as spicy foods, citrus fruits, tomatoes, caffeinated beverages, and alcohol, should be avoided by people who have the condition. Symptoms can also be avoided by eating more frequently and in smaller portions, as well as by standing up straight after meals. The management of hyperacidity can benefit from stress-reduction approaches like meditation or exercise. Antacids are often used over-the-counter drugs that offer momentary relief from symptoms of hyperacidity. By balancing out the excess stomach acid, they function. The production of acid can be decreased and longer-lasting relief can be obtained with the help of H2 blockers and Proton Pump Inhibitors (PPIs).

Ingredients and Medicinal Uses of Acidogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Punarnava	*Boerhavia diffusa*	Yakrith Soth Har	• Reduces the inflammation in liver	115.0 mg
Bhoomi Amla	*Phyllanthus niruri*	Kamala Hara, Yakrith Pleeha Vriddhi Hara	• Reduces jaundice • Reduces enlargement of liver and spleen	57.5 mg
Makoy	*Solanum nigrum*	Jeerna Yakrith Vriddhi Hara	• Reduces enlargement of liver	57.5 mg
Sounf	*Foeniculum vulgare*	Dipan	• Increases digestive power	75.0 mg
Nishoth	*Operculina turpethum*	Rechan, Udavartahara	• Laxative, • Alleviates abdominal bloating	75.0 mg
Mulethi	*Glycyrrhiza glabra*	Chardi Nigrahana, Kantya	• Alleviates vomiting, • Good for throat	75.0 mg

Acidogrit is Useful in:

- **Hyperacidity**
- **Regurgitation**
- **Heartburn**
- **Peptic Ulcers**
- **Indigestion**



Acidogrit: Description in Classical Texts:

Acidogrit tablet is prepared by incorporating the knowledge from traditional Ayurveda with modern technology. The effects of the herbs used in this drug have been practically used in traditional medicine for years.

The three main herbs in this formulation are Punarnava, Bhoomi amla and Makoy extracts. These herbs are known for the management of Ajeerna (Indigestion), Kamala (Jaundice), Agnimandya (reduced appetite), Yakrithvriddhi (Hepatomegaly), Yakritpleeharoghar (Liver and Spleen disorders) in our Ayurvedic texts.

Saunf/Mishreya has sweet, pungent and bitter tastes and madhura vipaka. It is hot in potency and has the qualities of lightness and dryness. It is able to pacify vata and kapha doshas. It is effective in vomiting, hyperacidity and increases digestive power.

Nishoth/Trivrt has bitter and pungent tastes and has the qualities of lightness, dryness and sharpness. It has katu vipaka. It pacifies pitta and kapha doshas and has laxative action as well.

Mulethi/ Yashtimadhu has a sweet taste and madhura vipaka. This drug pacifies vata and pitta doshas. It possess heavy and unctuous qualities as well. This drug is effective in reducing stomach pain and vomiting.

Scientific Evidence of Acidogrit:

Analysis of Acidogrit tablet was done by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. During the analysis of Acidogrit tablet various compounds were observed at 254 nm wavelength generally vanillic acid

at 19.317 minutes, and anethole at 51.712 minutes; at 281 nm wavelength, 5-hydroxyl methyl furfural (5-HMF) at 9.067 minutes, and glabridin at 50.571 minutes, as shown in Fig. 1. In the chromatograms, the green line shows the mix standards and pink line indicates the test sample.

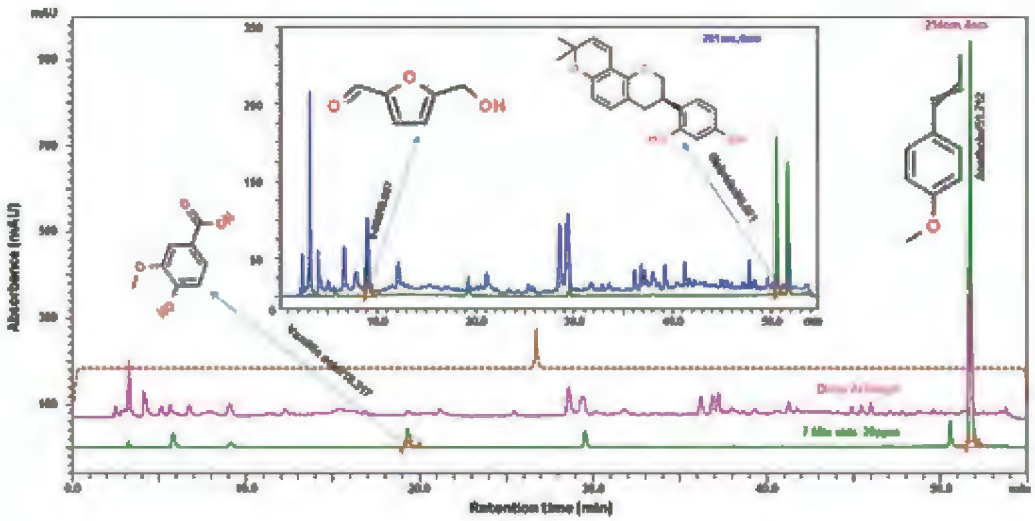


Fig.1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Acidogrit tablet. In Acidogrit tablet analysis, the various compounds were observed mainly vanillic acid (19.317 minutes), and anethole (51.712 minutes) at 254 nm wavelength; 5-hydroxyl methyl furfural (5-HMF) (9.067 minutes), and glabridin (50.571 minutes) at 281 nm wavelength. In the chromatograms, the green line shows the mix standards and pink line indicates the test sample.

Dose and Method of Use of Acidogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

PANCOGRIT पेन्कोग्रिट

Introduction to Pancreatic Disorders:

Acute Pancreatitis:

Acute pancreatitis is a common disease and is the leading cause of hospitalization among gastrointestinal disorders in the United States. It involves the acute inflammation of the pancreas. Acute pancreatitis leads to significant short- and long-term morbidity, which in a significant minority causes prolonged debility, recurrent disease, and pancreatic exocrine and/or endocrine insufficiency. The severity of acute pancreatitis varies widely, from mild conditions needing conservative treatment to severe and complicated diseases with high morbidity and mortality. The mortality of acute pancreas ranges from 3% in patients with mild edematous pancreatitis to as high as 20% in patients with pancreatic necrosis. The causes of acute pancreatitis include gallstones, alcohol use, hypertriglyceridemia, Drug-induced pancreatitis, Idiopathic, Post-procedural (endoscopic retrograde cholangiopancreatography or abdominal surgery), Ampullary stenosis, which is formerly known as sphincter of Oddi dysfunction type I, Autoimmune pancreatitis, type I (systemic IgG4 disease-related), and type II,Viral infections like Coxsackie, Cytomegalovirus, Echovirus, Epstein-Barr virus, Hepatitis A/B/C, HIV, Mumps, Rubella, and Varicella. The classification of pancreatitis is based on clinical, morphologic, and histologic criteria. The Atlanta classification broadly classifies acute pancreatitis into two categories i:e interstitial edematous acute pancreatitis and Necrotizing acute pancreatitis. Interstitial edematous acute pancreatitis is characterized by the acute inflammation of the pancreatic parenchyma and surrounding peri-pancreatic tissue. Necrotizing acute pancreatitis is characterized by necrosis of pancreatic parenchyma and peri-pancreatic tissue. Based on the severity Acute pancreatitis can be classified as mild acute pancreatitis (MAP), moderately severe acute pancreatitis (MSAP), and severe acute pancreatitis (SAP). Diagnostic parameters to evaluate acute pancreatitis are serum triglycerides, full blood count, renal and liver function tests, glucose, calcium, transabdominal ultrasound, and chest imaging. The basic treatment of patients with mild AP is to provide supportive care, which includes resuscitation with isotonic intravenous fluids, pain control, continuous monitoring.

Chronic Pancreatitis:

Chronic pancreatitis is a progressive inflammatory disease of the pancreas that affects both functions of the pancreas. For example, when the exocrine function is affected, patients will present with pancreatic insufficiency, steatorrhea, and weight loss. Pancreatic insufficiency results when greater than 90% of the organ is damaged. The incidence

depends on the severity of disease and can be as high as 85% in severe chronic pancreatitis. On the other hand, impairment of the endocrine function of the pancreas will eventually result in pancreatogenic diabetes (Type 3c diabetes). Chronic pancreatitis is unlike acute pancreatitis. Patients with chronic pancreatitis may be asymptomatic for long periods of time. Causes of chronic pancreatitis include alcohol abuse, ductal obstruction (malignancy, stones, trauma), genetics (cystic fibrosis, hereditary pancreatitis), chemotherapy, and autoimmune diseases such as systemic lupus erythematosus (SLE) or autoimmune pancreatitis. The goal of treatment is to decrease abdominal pain and improve malabsorption. Pain is secondary to inflammation, neuropathic mechanisms, and blocked ducts.

Other Pancreatic Disorders:

The pancreas is a gland that sits behind the stomach and plays a key role in the digestive system. It supplies the intestines with digestive enzymes that split the fats, proteins and carbohydrates in the diet into digestible molecules, and it produces insulin and other hormones that control the body's ability to use sugar (glucose). When the gland did not perform its function properly leading to cause several health problems. These include Pancreatitis, Pancreatic cancer and Cystic fibrosis: a genetic disorder in which thick, sticky mucus can also block tubes in the pancreas.

Ingredients and Medicinal Uses of Pancogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Sarpunkha (Wl. Pt.)	*Tephrosia purpurea*	Pleehaghna, Gulmahara, Jwara Har	• Cures splenic disorders • Cures abdominal swelling • Anti-pyretic	50 mg
Saunth (Rz.)	*Zingiber officinale*	Deepana, Sopha Har, Shoolajit	• Promotes digestion • Anti-inflammatory • Pain-relieving	50 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Shoth Har, Gara Hara, Shoolanut	• Anti-inflammatory • Anti-toxic • cures pain	50 mg
Ashwagandha (Rt.)	*Withania somnifera*	Balya, Sopha Har, Visha Har, Rasayana	• Promote strength • Anti-inflammatory • Anti-toxic • Rejuvenating	50 mg
Fine Powder of:				
Revandchini (Rt.)	*Rheum emodi*	Mrdurechani, Balya	• Mild laxative • Promote strength	200 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Mooli (Sd.)	*Raphanus sativus*	Jwra Har, Ama pachana, Deepana	• Antipyretic • Digests accumulated metabolic wastes • Promotes digestion	100 mg
Mulaka Ksara	Classical Preparation	Ashmari Har, Anaha Har, Visha Har, Vidradhi Har	• Cure calculi, • Cures abdominal distension • Anti-toxic • Cures internal abscess	10 mg

Pancogrit is Useful in:

- **Acute Pancreatitis**
- **Chronic Pancreatitis**
- **Other Pancreatic Disorders**

Pancogrit: Description in Classical Texts:

Sarpunkha, mentioned under Guduchyadi varga in Bhava prakasha, has bitter and astringent tastes with light, dry and sharp qualities inherent in it. Hot potency and katu vipaka. This drug pacifies Kaphavata doshas. It can cure conditions like Liver diseases, Wounds, Toxins/poison, Asthma and Fever.

Ginger/sunti is explained under Hareetakyadi varga in Bhava prakasha and has pungent taste and is hot, light and dry in qualities and hot in potency as well. It has madhura vipaka and pacifies kapha vata doshas. It can cure various conditions like Pain, Constipation, Abdominal distention and is good for digestion.

Punarnava is mentioned under Guduchyadi varga in Bhava prakasha. It is sweet, bitter and astringent in taste with the qualities of lightness and dryness in it. It is hot in potency and pacifies kapha vata doshas. It has katu vipaka. It is anti-inflammatory, cures anemia and is anti-toxic.

Bhava prakasha has explained about Ashwagandha in Guduchyadi varga. It has pungent, bitter and astringent tastes with the qualities of lightness and unctuousness. It is hot in potency and possess katu vipaka. It pacifies kapha vata doshas and is rejuvenating and strengthening in action. It can cure Leucoderma, Eczema, Skin diseases and Tuberculosis.

Revandchini has pungent and bitter tastes. Qualities of lightness, dryness and sharpness are present in it. It has hot potency and pacifies kapha pitta doshas. It can cure diseases of gastro-intestinal system.

Mooli has pungent and bitter tastes. It is mentioned under Shaka varga by Bhava prakasha. It is light in quality with a hot potency. It has katu vipaka and can pacify all three doshas. It is cardiotonic and relieves pain.

Mooli kshar is prepared from mooli. Susruta Samhita mentions about it in Sutrasthana. It is burnt to ashes and then added with four times water, mixed well, strained and kept overnight. Next day, strained and repeat for three times. Then the water is heated to evaporate till white kshara is obtained. It is used for varous conditions like liver diseases and as a diuretic.

Scientific Evidence of Pancogrit:

The polyherbal formulation "Pancogrit" was tested at the Patanjali Research Foundation facility to decipher its efficacy against acute pancreatitis in vitro. The study was performed by taking caerulein and tumor necrosis factor-alpha (TNF-α) as inducing agents of acute pancreatitis in human pancreatic acinar and duct cells. Caerulein is a synthetic analog of the cholecystokinin hormone present in the small intestine. It primarily functions as a smooth muscle contraction factor resulting in the release of pancreatic enzymes such as amylase, lipase, etc., which ultimately leads to pancreatic damage. Whereas, TNF-α is a pro-inflammatory cytokine known to trigger inflammatory conditions in the pancreas. It predominantly contributes to the systemic progression of inflammation leading to end-organ dysfunction. In this study, Pancogrit at cytosafe doses showed to mitigate the release of TNF-α induced interleukin- 6 (IL-6) and interleukin-8 (IL-8) pro-inflammatory cytokine in pancreatic cells. In addition, Pancogrit dose-dependently reduced the increase in genetic expressions of IL-6, interleukin-1β (IL-1β), intercellular adhesion molecule 1 (ICAM1), and signal transducer and activator of transcription 3 (STAT3) genes. Next, when the efficacy of Pancogrit was evaluated for its anti-oxidative properties, Pancogrit was found to ameliorate the cumene hydroperoxide oxidative stress. As Pancogrit was found to have both anti-oxidative and anti-inflammatory properties, its efficacy was tested on various intracellular signaling mechanisms that lead to acute pancreatitis. It was found that it not only regulates the NF-κB signaling pathway but it also plays a major role in regulating IL-6/STAT3 signaling mechanisms at the transcriptional level. Whereas, in the caerulein-induced model, Pancogrit at the cytosafe doses mitigated the abnormal release of amylase and lipase enzymes by the pancreatic acinar cells. Taken together, Pancogrit is shown to mitigate cellular damage by regulating digestive enzyme levels; inhibits the rise in inflammatory responses and oxidative stress by regulating the multiple signaling pathways involved in acute pancreatitis. Thus, Pancogrit can be used as a potent herbal medicine for alleviating acute pancreatitis.

Phytochemical analysis of Pancogrit was

performed using High Performance Thin Layer Chromatography (HPTLC) at 254 nm and 366 nm wavelength. The fingerprinting confirms the presence of 5 band at 254 nm and 7 band at 366nm as shown in Fig. 1. Further Ultra High Performance Liquid Chromatography Quadrupole Time of Flight Mass (UHPLC/MS-QToF) spectrometry analysis confirms the presence of 85 phytometaboloites, details are shown in Fig. 2 and Table 1.

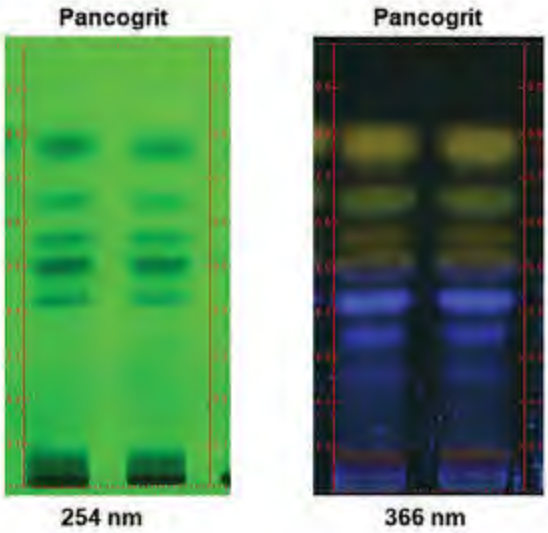


Fig. 1, High Performance Thin Layer chromatography study at 254 nm wavelength confirm the presence of 5 major bands whereas at 366 nm wavelength 6 major bands are observed.

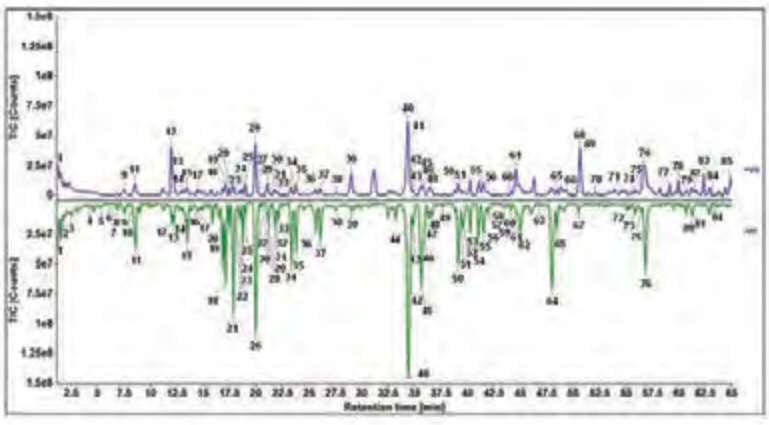


Fig. 2: Total ion chromatograms (TIC) of Pancogrit tablet in both positive (in blue) and negative (in green) ionization mode. Numbers 1 to 85 in the chromatograms represent the phyto-metabolites, identified in Ultra High Performance Liquid Chromatography Quadrupole Time of Flight Mass (UHPLC/MS-QToF) spectrometry analysis.

Table 1: Identified compounds in Pancogrit tablets (PRF/CHI/0223/0262) by UPLC/MS-QToF.

Peak number	Component Name	Formula	Neutral Mass (Da)	Observed m/z +ve / -ve	Mass Error (mDa)	RT (min) +ve / -ve	Adducts
1	N-(1-Deoxy-1-fructosyl)leucine	C12H23NO7	293.1475	294.1537	-1	1.41	+H
				292.1395	-0.6	1.44	-H
2	Gallic acid	C7H6O5	170.0215	169.0131	-1.2	1.72	-H
3	4-Hydroxyglucobrassicin	C16H20N2O10S2	464.0559	463.0485	-0.2	2.53	-H
4	Catechin 7-O-β-D-glucopyranoside	C21H24O11	452.1319	451.1242	-0.4	4.31	-H
5	Glucoraphasatin	C12H21NO9S3	419.0378	418.0303	-0.2	5.36	-H
6	(+)-Catechin-5-O-beta-D-glucopyranoside	C21H24O11	452.1319	451.1243	-0.3	6.17	-H
7	Catechin 4'-O-beta-D-glucopyranoside	C21H24O11	452.1319	451.1241	-0.5	6.54	-H
8	(-)-epicatechin-3'-O-glucoside	C21H24O11	452.1319	451.1241	-0.5	6.88	-H
9	Procyanidin B1	C30H26O12	578.1424	579.1507	1	7.52	+H
				577.1354	0.2	7.56	-H
10	6-C-Glucopyranosylcatechin	C21H24O11	452.1319	451.1244	-0.2	8.19	-H
11	Catechin	C15H14O6	290.079	291.0848	-1.6	8.53	+H
				289.0712	-0.6	8.58	-H
12	Fulvine	C16H23NO5	309.1576	310.1638	-1.1	11.99	+H
				354.1556	-0.2	12.03	+HCOO
13	Hastatuside A	C16H18O9	354.0951	355.1012	-1.1	12.2	+H
				399.093	-0.3	12.22	+HCOO
14	Procyanidin B1 3-O-gallate	C37H30O16	730.1534	731.1643	3.6	13.29	+H
				729.1478	1.7	13.33	-H
15	Piceatannol 3-beta-D-glucoside (Astringin)	C20H22O9	406.1264	407.1322	-1.5	13.47	+H
				405.1192	0.1	13.51	-H
16	Procyanidin B2 3-O-gallate	C37H30O16	730.1534	729.146	-0.1	14.42	-H
17	Procyanidin B2	C30H26O12	578.1424	579.1511	1.4	14.48	+H
				577.1353	0.1	14.51	-H
18	Aloe emodin 8-glucoside	C21H20O10	432.1057	455.0944	-0.4	17.1	+Na
				431.0982	-0.1	17.12	-H
19	Rutin	C27H30O16	610.1534	611.1621	1.4	17.44	+H
				609.1468	0.7	17.48	-H
20	(+)-Gallocatechin hexaacetate	C27H26O13	558.1373	559.1451	0.4	17.7	+H
				557.1302	0.1	17.74	-H
21	Rhein-8-glucoside	C21H18O11	446.0849	445.0771	-0.6	17.85	-H
22	Piceatannol	C14H12O4	244.0736	243.0655	-0.8	17.95	-H
23	Procyanidin B3 3-O-gallate	C37H30O16	730.1534	731.1645	3.8	18.16	+H
				729.1472	1.1	18.22	-H
24	Sennoside B	C42H38O20	862.1956	885.1902	5.3	18.72	+Na
				861.1922	3.8	18.75	-H

25	Cassialoin	C21H22O9	418.1264	419.1324	-1.3	19	+H
				417.1188	-0.3	19.03	-H
26	Rhaponticin	C21H24O9	420.142	421.1481	-1.2	19.93	+H
				465.14	-0.2	19.97	+HCOO
27	Kaempferol-3-O-rutinoside	C27H30O15	594.1585	595.167	1.2	20.34	+H
				593.1518	0.6	20.39	-H
28	Sennoside D	C42H40O19	848.2164	847.2121	3	20.57	-H
29	Scopoletin	C10H8O4	192.0423	193.0479	-1.7	21.09	+H
				191.034	-1	21.14	-H
30	Isorhamnetin-3-O-β-rutinoside	C28H32O16	624.169	625.1787	2.4	21.4	+H
				623.1628	1.1	21.44	-H
31	1-O-beta-D-Glucopyranosylaloeemodin	C21H20O10	432.1057	455.0942	-0.7	21.76	+Na
				431.0979	-0.5	21.79	-H
32	Sennoside G	C42H38O20	862.1956	861.1912	2.8	21.99	-H
33	Sennoside C	C42H40O19	848.2164	871.2113	5.7	22.11	+Na
				847.2118	2.7	22.14	-H
34	Sennoside A	C42H38O20	862.1956	885.1907	5.9	23.33	+Na
				861.1916	3.3	23.37	-H
35	Rhamnocitrin 3-rhamninoside	C34H42O19	754.232	777.2255	4.3	23.77	+Na
				753.2271	2.3	23.79	-H
36	Emodin 8-O-glucoside	C21H20O10	432.1057	455.0942	-0.7	25.61	+Na
				431.098	-0.3	25.67	-H
37	Rhaponticin 6''-O-gallate	C28H28O13	572.153	573.1617	1.4	26.04	+H
				571.1456	-0.1	26.1	-H
38	N-feruloyltyramine	C18H19NO4	313.1314	314.1376	-1.1	27.62	+H
				312.1235	-0.6	27.68	-H
39	Rhapontigenin	C15H14O4	258.0892	259.0951	-1.4	29.01	+H
				257.0813	-0.7	29.08	-H
40	Desoxyrhaponticin	C21H24O8	404.1471	405.1537	-0.7	34.36	+H
				449.145	-0.4	34.39	+HCOO
41	Torachrysone 8-O-glucoside	C20H24O9	408.142	431.1309	-0.4	34.46	+Na
42	Chrysophanein	C21H20O9	416.1107	439.0996	-0.3	34.56	+Na
				415.1032	-0.2	34.58	-H
43	Aloe emodin 1-beta-D-glucopyranoside	C21H20O10	432.1057	455.094	-0.9	34.86	+Na
				431.098	-0.4	34.89	-H
44	Apigenin 7-(6''-O-acetyl)-glucoside	C23H22O11	474.1162	473.1088	-0.2	35.47	-H
45	Emodin-6-O-beta-D-glucopyranoside	C21H20O10	432.1057	455.0939	-1	35.57	+Na
				431.098	-0.4	35.63	-H
46	Chrysophanol 8-glucoside	C21H20O9	416.1107	439.0991	-0.9	35.81	+Na
				415.103	-0.4	35.84	-H

47	Catechin pentaacetate	C25H24O11	500.1319	499.1261	1.5	36.25	-H
48	Hexahydrocurcumin	C21H26O6	374.1729	397.161	-1.2	36.46	+Na
				373.1652	-0.5	36.48	-H
49	2,3-dihydro-3β-O-sulfate withaferin A	C28H40O10S	568.2342	567.2273	0.3	37.66	-H
50	Epicatechin 5-O-beta-D-glucopyranoside-3-benzoate	C28H28O12	556.1581	579.1483	1	39.1	+Na
				555.1511	0.3	39.14	-H
51	Withanoside IV	C40H62O15	782.4089	805.4023	4.2	39.31	+Na
				827.4101	3	39.31	+HCOO
52	Citreorosein	C15H10O6	286.0477	285.0396	-0.8	39.58	-H
53	Pinostilbenoside	C21H24O8	404.1471	449.1451	-0.2	40.28	+HCOO
54	Emodin-8-O-(6'-O-acetyl)-β-D-glucoside	C23H22O10	458.1213	457.1141	0	41.04	-H
55	Physcion	C16H12O5	284.0685	285.0742	-1.5	41.47	+H
				283.0605	-0.7	41.49	-H
56	Withanoside VI	C40H62O15	782.4089	805.4031	5	41.57	+Na
				827.4102	3.1	41.57	+HCOO
57	Withanoside II	C40H62O16	798.4038	843.4054	3.4	41.68	+HCOO
58	1-Hydroxy-3-methyl-8-(6-O-acetyl-beta-D-glucopyranosy-loxy)-9,10-anthraquinone	C23H22O10	458.1213	457.1137	-0.3	41.98	-H
59	Coccineone B	C16H10O6	298.0477	297.0401	-0.4	43.39	-H
60	Coagulin Q	C34H52O10	620.3561	643.3474	2.1	44.13	+Na
				665.3554	1.2	44.12	+HCOO
61	Desoxyrhapontigenin	C15H14O3	242.0943	243.0999	-1.6	44.6	+H
				241.086	-1.1	44.64	-H
62	Aloe emodin	C15H10O5	270.0528	269.0447	-0.9	44.97	-H
63	4',7-Dihydroxy-3',5'-dimethoxyisoflavone	C17H14O6	314.079	313.0709	-0.8	46.76	-H
64	Rhein	C15H8O6	284.0321	283.0243	-0.5	48.01	-H
65	Herpepropenal	C30H30O10	550.1839	573.1743	1.2	48.46	+Na
				549.1773	0.7	48.48	-H
66	(+)-Tephrorin A	C24H26O7	426.1679	427.174	-1.1	50.39	+H
67	Withanoside V	C40H62O14	766.414	811.415	2.9	50.52	+HCOO
68	Withaferin A	C28H38O6	470.2668	493.256	-0.1	50.64	+Na
69	6-Gingerol	C17H26O4	294.1831	317.1712	-1.1	50.72	+Na
70	Tephropurpulin A	C23H24O6	396.1573	397.1637	-0.9	52.21	+H
71	Lanceolatin B	C17H10O3	262.063	263.0688	-1.5	55.01	+H
72	Boeravinone K	C17H12O6	312.0634	311.0556	-0.6	55.08	-H
73	Boeravinone B	C17H12O6	312.0634	311.0555	-0.7	55.89	-H
74	(+)-Purpurin	C24H24O7	424.1522	447.1408	-0.6	55.95	+Na
75	Torachrysone	C14H14O4	246.0892	247.0949	-1.6	56.44	+H
				245.081	-1	56.46	-H
76	Emodin	C15H10O5	270.0528	271.0586	-1.5	56.82	+H
				269.0446	-0.9	56.84	-H

77	Deguelin	C23H22O6	394.1416	395.1478	-1.1	59.11	+H
78	Anisic aldehyde	C8H8O2	136.0524	137.0582	-1.5	59.97	+H
79	(+)-Tephrorin B	C30H28O6	484.1886	485.1961	0.3	60.83	+H
80	Chrysophanol	C15H10O4	254.0579	253.0497	-0.9	61.26	-H
81	Boeravinone A	C18H14O6	326.079	325.071	-0.8	61.34	-H
82	Purpurenone	C21H20O4	336.1362	359.1245	-0.9	61.58	+Na
83	6-Gingediacetate	C21H32O6	380.2199	403.2084	-0.7	62.35	+Na
84	6-Dehydrogingerdione	C17H22O4	290.1518	291.1586	-0.5	63.16	+H
				289.144	-0.6	63.16	-H
85	3'-Methoxy-[6]-Gingerdiol 3,5-diacetate	C22H34O6	394.2355	417.2241	-0.6	64.92	+Na

Dose and Method of Use of Pancogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

MADHUGRIT मधुग्रिट

Introduction to High Blood Sugar:

People with type 1 and type 2 diabetes, as well as pregnant women with gestational diabetes, might be affected by hyperglycemia (high blood sugar). It can infrequently afflict people who do not have diabetes, but it mainly affects people who are critically unwell, such as those who have just had a stroke or heart attack, or those who have a severe infection. It's critical to understand and treat hyperglycemia since it can lead to major health consequences if left unchecked. Mild bouts are typically not a reason for worry and can be treated simply or return to normal on their own. However, hyperglycemia can be harmful if blood sugar levels reach extremely high or remain elevated for an extended length of time.

The most common cause of hyperglycemia is a lack of insulin. This can occur as a result of insulin resistance and/or problems with the pancreas, the organ that produces insulin. Other hormones can also play a role in the development of hyperglycemia. Excess cortisol (the "stress hormone") or growth hormone, for example, might cause blood sugar levels to rise.

Hyperglycemia symptoms in diabetics usually appear gradually over a few days or weeks. There may be no symptoms in some situations until the blood sugar level is quite high. Hyperglycemia symptoms include:

Increased thirst and a dry mouth
Urge to urinate often
Weariness
Unintentional weight loss
Impaired eyesight
Recurring infections such as thrush, cystitis (bladder infection), and skin diseases

Various measures are taken to bring blood sugar back to normal levels, which include: Change in the diet, Drinking plenty of sugar-free water if one is dehydrated, Gentle and regular activity, such as walking as well as Change in medicine dosage.

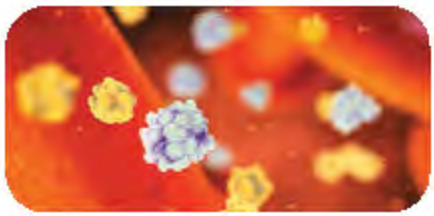
Ingredient and Medicinal Uses:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Chandraprabha vati	Classical Preparation	Prameha Har Mutra Vikara Har	• Useful in diabetes • Useful in urinary disorders	200 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Giloy (St.)	*Tinospora cardifolia*	Prameha Har Tridoshagna	• Useful in diabetes • Balances tridoshas	100 mg
Indrayana(Rt.)	*Citrullus colocynthis*	Vibandh Har Prameha Har	• Relieves constipation • Useful in diabetes	10 mg
Karela (Ft.)	*Momordica charantia*	Madhumeha Har	• Useful in diabetes	50 mg
Chirayata (Wl. Pt.)	*Swertia chirata*	Rakta Dosha Har Vibandh Har	• Useful in disorders caused by vitiation of blood • Relieves constipation	50 mg
Shatavari (Rt.)	*Asparagus racemosus*	Tridoshagna Rasayana Agni Vardhaka	• Balances tridoshas • Acts as rejuvenation • Improves digestion	25 mg
Ashwagandha (Rt.)	*Withania somnifera*	Shoth Har Kshayghna	• Reduces inflammation • Useful in improving depleted dhatus	25 mg
Shuddh Shilajit (Exd.)	*Asphaltum punjabianum*	Prameha Har Yogavahi	• Useful in diabetes • Enhances the circulation	50 mg

Madhugrit is Useful in:

- **High Blood Sugar**
- **Pre-Diabetic Conditions**
- **Diabetic Metabolic Syndrome**



Madhugrit: Desciption in Classical Texts:

Madhugrit is the sole Ayurvedic proprietary medicine containing well established herbal extracts shown in the table. Bhaishajya Ratnavali gives the detail description of ingredients and the indications about Chandraprabha vati which contains Karpura, Vacha, Musta, Bhunimbha, Devdaru, Haridra, Ativisha, Darvi, Pippali mula hitraka dhanyaka, Triphala, Chavya, Vidanga, Gajapippali, Shunti, Maricha, Pippali, Swarna makshika, Yavakshara, Sarja Kshara, Saindhava Lavana, Sourvarchala Lavana, Vida lavana, Triverit Danti, Twak, Ela, Patra, vamshalochana, sita, loha bhasma, shuddha shilajit, guggulu that is used in the Prameha, Mutrakricchra, Ashmari, Mutraghata, Shwasa, kasa, antra vridhi, pandu, kamala, halimaka, kushta, mandagni, aruchi, vata-pitta-kapha vyadhi hara.

Scientific Evidence for Madhugrit:

The ingredients used in the formulation mentioned in the table are known to maintain the altered blood sugar levels due to the presence of anti-diabetic, anti-oxidant and anti-inflammatory properties. Pre-clinical evaluation of the anti-diabetic agents are performed at Patanjali Research Foundation. The parameters like cell viability, glucose uptake, inflammation, wound healing, formation of advanced glycation end products and modulation in alpha-amylase release were used to see the therapeutic potential of Madhugrit through In-vitro studies. Adjacently the In-vivo studies were performed on Caenorhabditis elegans for assessment of glucose levels, % curling, brood size, triglyceride accumulation, lipid deposition, ROS (Reactive oxidative stress) generation, and lipid peroxidation (As shown in Fig. 1). On Parallel as a control the biguanide Metformin was used.

Fig.1 Represent the schematic studies of Madhugrit on *C. elegans* confirms the efficacy of the medicine.

The phytometabolite quantitative analysis of Madhugrit performed using UHPLC (Ultra high performance Liquid chromatography) revealed the presence of gallic acid, methyl gallate, protocatechuic acid, magnoflorine, corilagin, coumarin, cinnamic acid, piperine, and palmatine at 270 nm wavelength, 250 nm for ellagic acid and 350 nm for rutine, as shown in Fig.2.

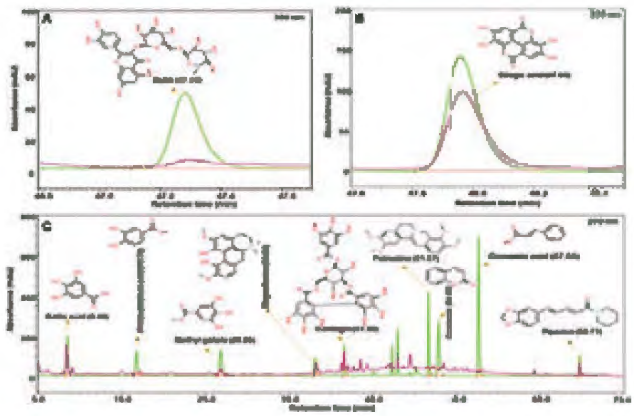


Fig.2 Phytometabolic analysis of Madhugrit through UHPLC confirm the presence of gallic acid, methyl gallate, protocatechuic acid, magnoflorine, corilagin, coumarin, cinnamic acid, piperine, and palmatine at 270 nm wavelength, 250 nm for ellagic acid and 350 nm for rutine.

Cell viability analysis of Madhugrit at different concentration (10,30 and 100 µg/ml) has shown no decrease in cell viability even at the higher concentration in all cell lines. With these initial results it indicates that the safety of Madhugrit at all physiological concentrations and no effect over the metabolic functionality of cells, as shown in fig.3.

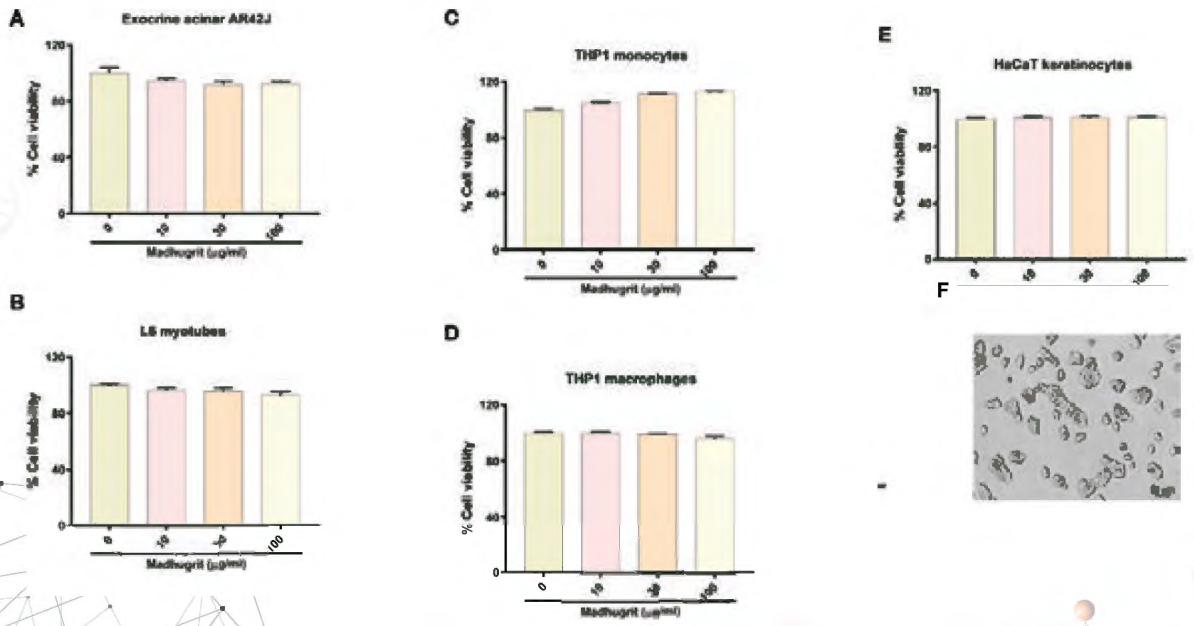


Fig 3: Analysis of Madhugrit fore Cell Viability. Cell viability of Madhugrit (10, 30, and 100 µg/ml) done on Exocrine acinar AR42J cells (A), L6 myotubes (B), THP1 monocytes (C), THP1 macrophages (D) and HaCaT keratinocytes (E) by Alamar blue assay. Respective images demonstrating the cell lines used for the analysis of Madhugrit for Cell viability (F-J)

In the analysis for α-amylase, it is observed that Madhugrit treated cells has released less α-amylase compared to metformin. Further the glucose uptake levels in the Madhugrit treated cells are 2 times higher than the cells treated with metformin. It is also observed that Madhugrit treated cells have inhibited the formation of AGEs (Advanced Glycation End products).

To help in control the low grade inflammation during the diabetes the anti-inflammatory properties in the Madhugrit are potent enough to inhibit the macrophage differentiation and release in pro-inflammatory cytokines.

In chronic diabetic conditions Madhugrit has shown its potential to reduce persistent inflammatory phenotypes particular macrophages subjected to high glucose and bacterial endotoxins. With these promising results the adjacent study was also done to find the wound healing potential of Madhugrit in high glycemic conditions. HaCat cells showed a defective wound healing process under high glycemic conditions where as Madhugrit showed a prominent wound healing.

Dose and Method of Use of Madhugrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://www.frontiersin.org/articles/10.3389/fendo.2022.1064532/full

Tablet

मधुनाशिनी वटी एक्स्ट्रा पॉवर
MADHUNASHINI VATI EXTRA POWER

Introduction to Diabetes Mellitus:

Diabetes is a chronic metabolic disorder that affects millions of individuals worldwide. It is characterized by high blood glucose levels, either due to inadequate production of insulin by the pancreas (Type 1 diabetes) or the body's inability to effectively use insulin (Type 2 diabetes). This condition poses significant challenges to patients' health, necessitating a comprehensive understanding of its causes, symptoms, and management strategies.

Type 1 diabetes, commonly diagnosed in children and young adults, occurs when the immune system mistakenly attacks and destroys the insulin-producing beta cells in the pancreas. This results in insufficient insulin production, causing glucose to accumulate in the bloodstream. The exact causes of Type 1 diabetes remain unclear, but genetic predisposition and environmental factors may play a role. On the other hand, Type 2 diabetes, which accounts for the majority of diabetes cases, occurs when the body becomes resistant to insulin or fails to produce enough insulin to meet its needs. This condition is closely linked to obesity, sedentary lifestyles, and poor dietary habits. Genetic factors, ethnicity, and age also contribute to the development of Type 2 diabetes. Diabetes exerts a profound impact on various aspects of an individual's health. Chronic hyperglycemia, or consistently high blood sugar levels, can lead to numerous complications, affecting major organs and systems in the body. These complications include cardiovascular disease, retinopathy (eye damage), nephropathy (kidney damage), neuropathy (nerve damage), and foot ulcers. Moreover, uncontrolled diabetes can impair the body's immune response, increasing susceptibility to infections. Additionally, diabetes is associated with a higher risk of mental health disorders such as depression and anxiety.

The emotional burden of managing a chronic disease, along with potential lifestyle changes and the fear of complications, can significantly impact the psychological well-being of individuals with diabetes. Diabetes management aims to maintain blood sugar levels within a target range to minimize the risk of complications. It typically involves a combination of lifestyle modifications, such as regular physical activity and a healthy diet, along with medication and insulin therapy. Self-monitoring of blood glucose levels, periodic medical check-ups, and ongoing education about the disease and its management are crucial for individuals with diabetes.

Prevention strategies play a pivotal role in curbing the rising prevalence of Type 2 diabetes. Promoting a healthy lifestyle, including regular exercise and a balanced diet, can significantly

reduce the risk of developing the disease. Public health initiatives, such as increasing awareness and providing accessible healthcare services, are essential in promoting early detection and management of diabetes.

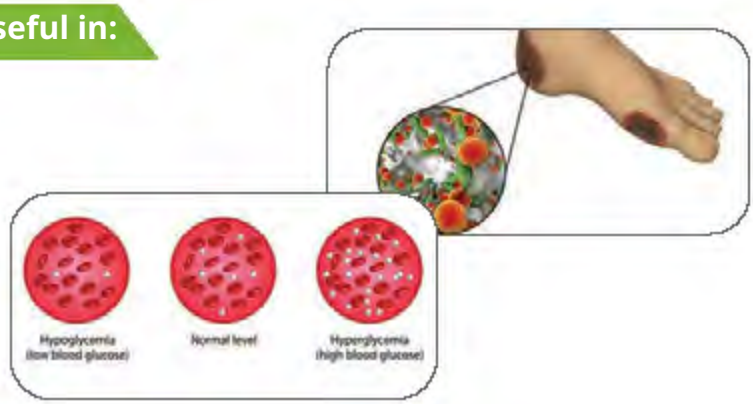
Ingredients and Medicinal Uses of Madhunashini Vati:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Wet Extract of:				
Giloy (St.)	*Tinospora cordifolia*	Prameha Har	• Alleviates diabetes	146.22 mg
Karela (Fr.)	*Momordica charantia*	Madhumeha Har	• Alleviates diabetes	36.55 mg
Bel Patra (Lf.)	*Aegle marmelos*	Madhumeha Har	• Alleviates diabetes	14.62 mg
Gudmar (Lf.)	*Gymnema sylvestre*	Madhumeha Har	• Alleviates diabetes	14.62 mg
Harad Choti (fr.)	*Terminalia chebula*	Prameha Har	• Alleviates diabetes	14.62 mg
Gokhru (Fr.)	*Tribulus terrestris*	Prameha Har	• Alleviates diabetes	14.62 mg
Vatjata (A. Rt.)	*Ficus bengalensis*	Madhumeha Har	• Alleviates diabetes	14.62 mg
Haldi (Rz.)	*Curcuma longa*	Prameha Har	• Alleviates diabetes	14.62 mg
Methi (Sd.)	*Trigonella foenum-graecum*	Madhumeha Har	• Alleviates diabetes	73.17 mg
Kuda Chhal (St. Bk.)	*Holarrhena antidysenterica*	Vrikkashool Har	• Alleviates pain due to renal problems	36.55 mg
Neem Patra (Lf.)	*Azadirachta indica*	Vranropak	• Wound healing	73.17 mg
Ashwagandha (Rt.)	*Withania somnifera*	Kshaya Har,	• Alleviates emaciation	14.62 mg
Baheda (Ft. Rind)	*Terminalia belerica*	Udarrog Har, Galrog Har	• Alleviates ascites • Alleviates throat diseases	14.62 mg
Kalmegha (Wl. Pt.)	*Andrographis paniculata*	Yakritvikar Har	• Alleviates liver diseases	73.17 mg
Kachur (Rz.)	*Curcuma zedoaria*	Puyameha Har	• Alleviates diabetes	14.62 mg
Neem (Bk.)	*Azadirachta indica*	Dushtavran Har	• Cures chronic wounds	73.17 mg
Amla (Fr. Rind)	*Emblica officinalis*	Yakritvikar Har	• Alleviates liver diseases	14.62 mg
Shilajeet	*Asphaltum punjabianum*	Prameha Har	• Alleviates diabetes	57.91 mg
Fine Powder of:				
Jamun (Sd.)	*Syzygium cumini*	Madhumeha Har	• Alleviates diabetes	17.48 mg
Kali Jeeri (Fr.)	*Centratherum anthelminicum*	Krimivikar Har	• Kills worms/parasites	8.74 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Chirayata (Wl. Pt.)	*Swertia chirayta*	Jwar Har, Kamala Har, Pandu Har	• Alleviate fever • Alleviate jaundice • Alleviate anaemia	8.74 mg
Kutki (Rt.)	*Picrorhiza kurroa*	Hridya, Yakritvikar Har	• Cardiotonic • Alleviate liver diseases	13.11 mg
Babul (Fr.)	*Acacia arbica*	Madhumeha Har	• Alleviates diabetes	4.38 mg
Kuchla Shuddh (Sd.)	*Strychnos nux-vomica*	Shaiyamutrataghna, Napumsakta Har	• Alleviates bed-wetting • Alleviates infertility	4.38 mg
Atish (Rt.)	*Aconitum heterophyllum*	Tiktapaushtika	• Nourishing in nature	0.43 mg
Praval Pishti	Classical Preparation	Kshaya Har	• Alleviate emaciation	0.88 mg
Vanga Bhasma	Classical Preparation	Prameha Har	• Alleviate diabetes	1.75 mg
Lauha Bhasma	Classical Preparation	Dhatudaurbalya Har	• Alleviate weakness of dhatu	1.75 mg

Madhunashini Vati is Useful in:

- **Diabetes Mellitus**
- **Diabetic Gangrene**



Madhunashini Vati: Description in Classical Texts:

Madhunashini Vati is made of traditionally practiced effective herbs against diabetes. Giloy has pungent, bitter and astringent in taste. Physical property is lightness. The vipaka is madhur and this drug is hot in potency. It pacifies vata, pitta, and kapha doshas and can cure indigestion, thirst, polyuria, anemia, skin diseases, and heart ailments.

Karela has bitter and pungent tasteswith qualities of lightness and dryness; hot potency and katu vipaka. It pacifies all three doshas. Bel patra is absorbent and pacifies vata dosha. Gudmar/Meshasringi has pungent and bitter tastes with qualities of lightness and dryness;

hot potency and katu vipaka. It pacifies kapha and vata doshas.
Harad/Hareetaki is the first drug mentioned in Hareetakyadi varga by Bhava prakasha. It has sweet, pungent, sour, astringent and bitter tastes in it. It is dry in quality and hot in potency. It has madhura vipaka.

Bhava prakasha has mentioned Gokhru in Guduchyadi varga, and it is sweet in taste and has cold potency with light and dry properties, pacifies vata dosha, and cures calculi, polyuria, asthma, cough, hemorrhoids, dysuria and heart ailments.

Vatjata has astringent taste with qualities of heaviness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas. Haldi is pungent, bitter in taste, and hot potency. It has dryness property. It pacifies pitta dosha. Useful in disease caused by vitiation of blood. Methi has pungent and bitter tastes with qualities of lightness and unctuousness; hot potency and katu vipaka.

Kuda chhal has bitter astringent tastes with lightness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas. Neem pacifies vata, pitta, kapha doshas; has a hot potency; katu vipaka. And light property. It helps in management of skin diseases, nausea, polyuria, fatigue, thirsty, cough,fever, anorexia, ulcer, worm infestation. Ashwagandha comes under Guduchyadi varga in bhavprakash nighantu. It is Astringent and Bitter in taste. Physical property is lightness. This drug is hot in potency. It pacifies vata, kapha doshas.

Baheda comes under Haritakyadi varga in bhavprakash nighantu. It is astringent in taste, and hot potency with lightness and dryness properties, and sweet vipaka. It pacifies pitta and kapha doshas. Kalmegh is bitter in taste; with dryness and lightness and katu vipaka with ablity to pacify kapha and pitta doshas. Kachur has tastes of pungent and bitter with qualities of lightness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas.
Amla comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, sour, astringent in taste and cold potency. It has heavy property and sweet vipaka. This drug pacifies vata, pitta and kapha doshas. It is good for management of malabsorption, abdominal diseases, vomiting, and diseases of liver and spleen.

Shilajeet has pungent and bitter tastes with hot potency and katu vipaka. It is rejuvenating and alleviates medo dosha. Jamun has sweet, sour and astringent tastes with qualities of heaviness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas.

Kali jeeri has bitter and astringent tastes with qualities of lightness, dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and pitta doshas. Chirayata has bitter taste with qualities of lightness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas. Kutki is pungent in taste; with properties of lightness, dryness and sharpness; having madhur vipaka and cold potency. It pacifies pitta, kapha doshas and helps in management of indigestion, thirst, polyuria, blood diseases and skin diseases.

Babul has astringent taste with qualities of heaviness, clarifying and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas. Shuddha Kuchla; comes under Amraadiphala varga in bhavprakash nighantu;

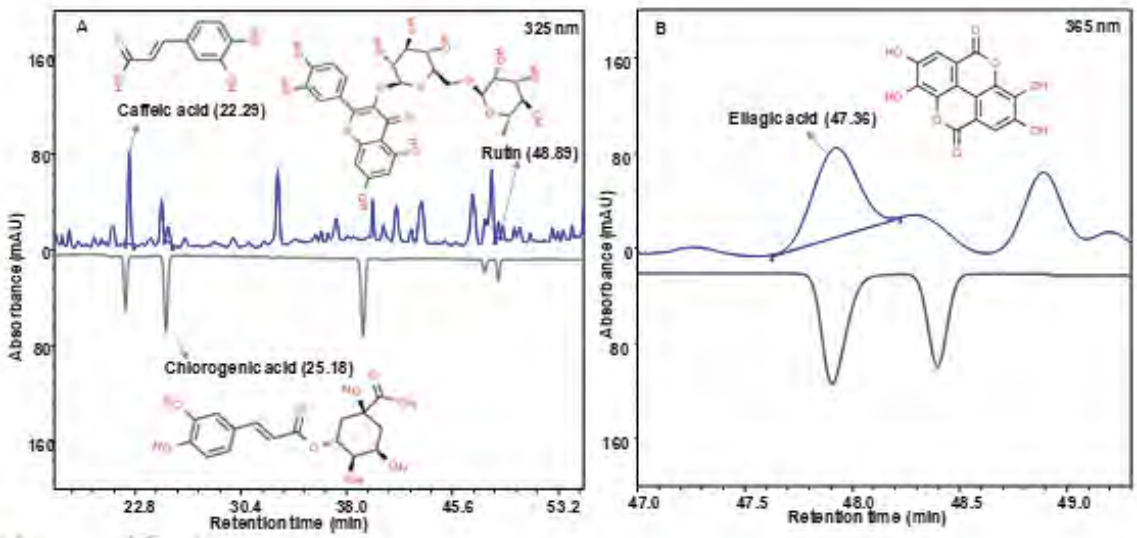
is bitter in taste, and cold potency. It has light and dry property and pacifies pitta & kapha doshas.

Atish has bitter and pungent tastes with qualities of lightness and dryness; hot potency and katu vipaka. It pacifies all three doshas, mainly kapha and pitta doshas. Praval Pishti is very much coolant, pacifies rakta and pitta and enhances ojas.

Vang bhasm is salty and astringent with lightness and dryness with a cold potency. Useful in male infertility and premature ejaculation. Baheda; It is astringent in taste, with hot potency and has light and dry property. It has sweet vipaka and pacifies pitta & kapha doshas. Lauha bhasma is considered as the best among rejuvenating drugs by Rasa Ratna Samucchaya and has very good efficacy in diabetes.

Scientific Evidence of Madhunashini Vati:

Madhunashini Vati was characterized by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. During the analysis of Madhunashini Vati, the different compounds were obtained at 270 nm wavelength mainly gallic acid at 6.69 minutes, vanillic acid at 24.12 minutes, corilagin at 33.03 minutes, picroside II at 50.21 minutes, picroside I at 57.25 minutes, and cinnamic acid at 60.42 minutes; at 325 nm wavelength caffeic acid at 22.29 minutes, chlorogenic acid at 25.18 minutes, and rutin at 48.89 minutes; at 365 nm wavelength ellagic acid at 47.36 minutes, as shown in Fig. 1. In the chromatograms, the black line represents the standard and blue line shows the test sample.



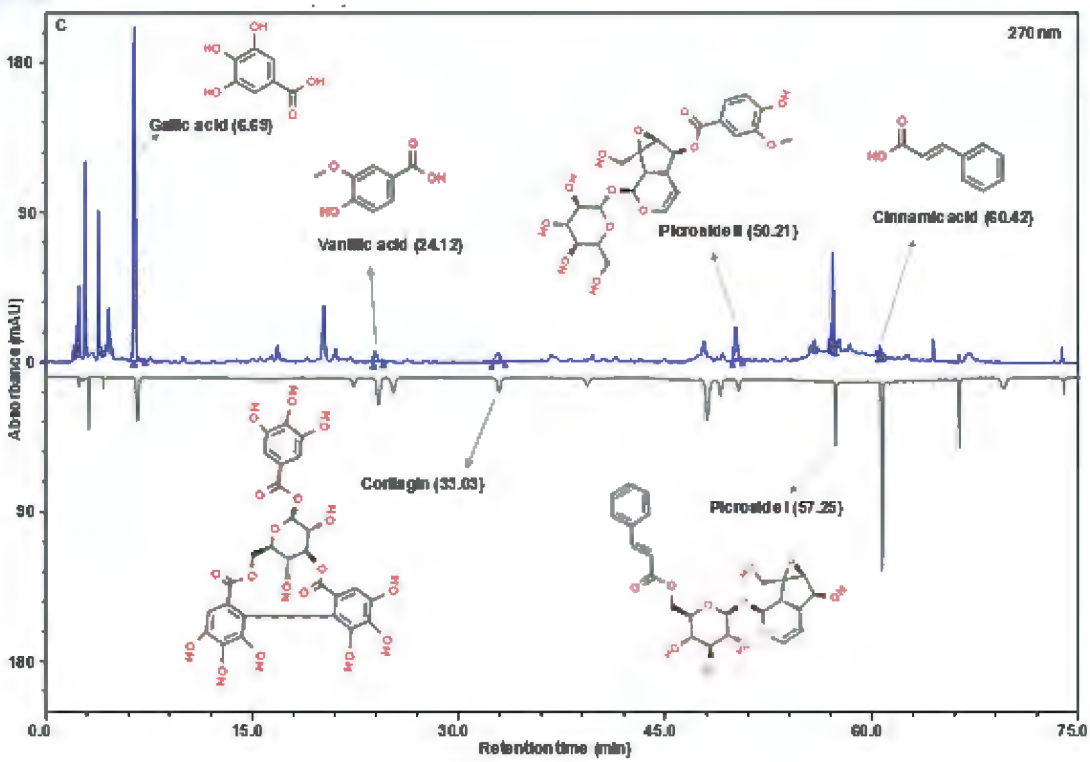


Fig. 1. Analysis of the Madhunashini Vati by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Madhunashini Vati, the compounds were obtained at 270 nm wavelength mainly gallic acid (6.69 minutes), vanillic acid (24.12 minutes), corilagin (33.03 minutes), picroside II (50.21 minutes), picroside I (57.25 minutes), and cinnamic acid (60.42 minutes); at 325 nm wavelength caffeic acid (22.29 minutes), chlorogenic acid (25.18 minutes), and rutin (48.89 minutes); at 365 nm wavelength ellagic acid (47.36 minutes). In the chromatograms, the black line shows the standards and blue line indicates the test sample.

Dose and Method of Use of Madhunashini Vati:

Dose and Frequency	1-2 Tablets, twice a day
Adjuvant	Water
Time of Administration	Empty stomach
Or as directed by the physician.	

Tablet

लिवोग्रिट LIVOGRIT

Introduction to Liver Disease:

Liver is considered as the powerhouse of the body. It is one of the vital organs involved in pathological manifestations of diseases. When liver functions are hampered due to lifestyle or alcoholic consumption, it will lead to life-threatening diseases.

Some of the major Liver disorders include Alcoholic Liver Disease (ALD) and Non-Alcoholic Steato-Hepatitis (NASH).

Alcoholic liver disease is associated with the regular consumption of alcohol and is emerging as a global public health hazard and is one of the major causes of sicknesses and death. The major illness due to Alcoholic liver disease includes steatosis, steatohepatitis, and cirrhosis. Steatosis (fatty liver) is seen in 90% of heavy drinkers, and if untreated, people are prone to the occurrence of severe liver maladies.

Non-Alcoholic Steato Hepatitis (NASH) is associated with excessive consumption of impure/ adulterated/overheated edible oil. Progression of non-alcoholic steatohepatitis causes hepatocellular ballooning, and liver inflammation, and an individual will land up having hepatic fibrosis, cirrhosis, or hepatocellular carcinoma. The global prevalence of non-alcoholic steatohepatitis is estimated to surge up to 56% by 2030. No drug has been globally approved for the treatment of non-alcoholic steatohepatitis to date and its therapy still remains a major challenge.

Ingredients and Medicinal Uses of Livogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extracts of:				
Punarnava (Rt.)	*Boerhavia diffusa*	Yakrith Soth Hara	• Reduces the inflammation in liver	230 mg
Bhoomi amla (Wl. Pt.)	*Phyllanthus niruri*	Kamala Hara, Yakrith-pleeha vriddhi Hara	• Reduces jaundice • Reduces enlargement of liver and spleen	115 mg
Makoy (Wl. Pt.)	*Solanum nigrum*	Jeerna-yakrith vriddhi Hara	• Reduces enlargement of liver	115 mg

Livogrit is Useful in:

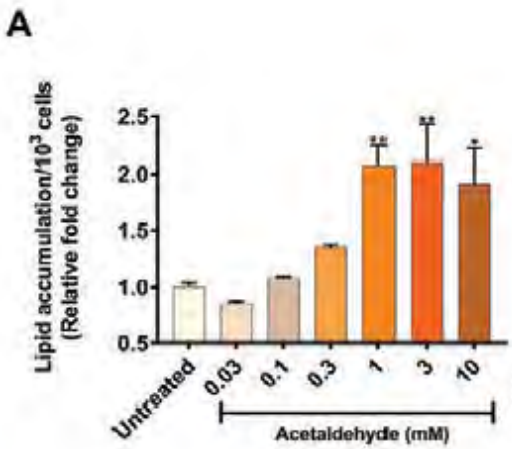
- **Indigestion**
- **Lack of Appetite**
- **Jaundice**

Livogrit: Description in Classical Texts:

The tri herbs used in Livogrit are *Boerhavia diffusa*, Phyllanthus niruri, and Solanum nigrum was more efficacious when used in a ratio of 2:1:1. These herbs are known for the management of Ajeerna (Indigestion), Kamala (Jaundice), Agnimandya (reduced Appetite), Yakrithvriddhi (Hepatomegaly), Yakritpleeharoghar (Liver and Spleen disorders) in our Ayurvedic texts. In Bhavaprakasha Nighantu 2006 edition, the usage of these herbs punarnava, bhumi amla, and makoy were described detailed in page numbers 421, 460 and 438 respectively.

Scientific Evidence of Livogrit:

Livogrit reduced the acetaldehyde-stimulated damage of molecular and biochemical pathways associated with lipogenesis, and β-oxidation leading to steatosis. Livogrit treatment at concentrations of 3, 10 and 30 µg/ml reduced the induction of lipogenesis while promoting fatty acid β-oxidation (as shown in Fig. 1). It reduced the formation of lipid bodies within the acetaldehyde-stimulated hepatoblastoma cell line (HepG2) cells, causing a reduction in the generation of reactive oxygen species (ROS), inflammation, and release of liver injury marker enzymes. It may normalize the process of autophagy which would revert the hepatocytes to a homeostasis state.



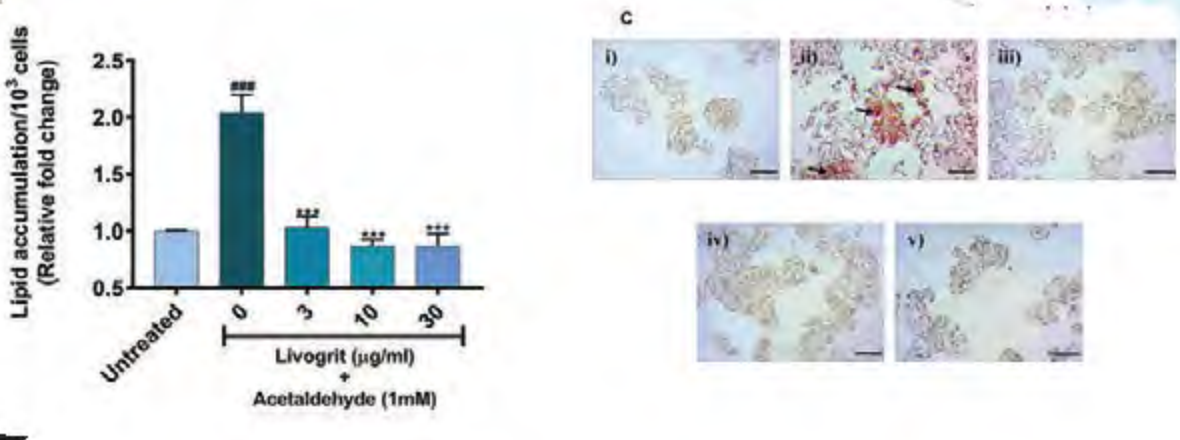


Fig.1 Effects of Livogrit on acetaldehyde-stimulated lipid accumulation in HepG2 cells. (A) acetaldehyde (0–10 mM), and (B) Livogrit (0–30 µg/ml) treatment of acetaldehyde-stimulated HepG2 cells. (C) images representing of ORO stain in HepG2 cells managed with (i) untreated, (ii) 1 mM acetaldehyde, (iii) 1 mM acetaldehyde + 3 µg/ml Livogrit, (iv) 1 mM acetaldehyde + 10 µg/ml Livogrit, (v) 1 mM acetaldehyde + 30 µg/ml Livogrit. Graph bar represents 20 µm. Results demonstrating mean ± SEM. analysis was done using One-way ANOVA with Dunnett's post-hoc. Untreated control versus acetaldehyde test concentrations * $p < 0.05$ and ** $p < 0.01$; Untreated control versus acetaldehyde (1 mM) ### $p < 0.001$; Livogrit test concentrations versus acetaldehyde (1 mM) *** $p < 0.001$.

At Patanjali Research Foundation a novel in vitro screening model for potential hepatoprotective agents was explored. The study outcomes showed that treatment of Livogrit led to a reduction of lipid accumulation, reactive oxygen species levels, AST (Aspartate aminotransferase, which is one of the liver enzymes, also known as Serum Glutamic-oxaloacetic Transaminase, or SGOT) release, Nuclear Factor kappa B (NFκB) activity and an increase in Glutathione, lipolysis, and Mitochondrial Membrane Potential by the modulation of genes like Fibroblast Growth Factor 21 (FGF21), Farnesoid X Receptor (FXR), CCAAT/enhancer-binding protein homologous protein (CHOP), and C-X-C motif chemokine 5 (CXCL5). Therefore, Livogrit might be used as a potential hepatoprotective agent with translational implications.

The further study demonstrates the detoxifying effect of Livogrit in thioacetamide (TAA) induced zebrafish model of hepatotoxicity. In this study, first Livogrit was screened for an effective dose and treatment time course. Once established, subsequent experiments were conducted to study the hepatoprotective effects of Livogrit with prednisone as the reference drug. A wide range of liver function variables like albumin, Aspartate aminotransferase, bilirubin, creatinine, platelet clotting factor, International Normalized Ratio (INR), and sodium blood serum were assessed to conclude the degree of liver dysfunctionality. Results from experiments confirm that Livogrit treatment for 14 days at an effective dose of 3-142 µg/kg significantly restored the altered serum biochemistry. The herbal formulation in comparison to prednisone successfully restored the liver dysfunction index to low risk. The liver cytology further showed a decline in hepatocyte cell death that further corroborated the promising curative potential of Livogrit.

Phytochemical analysis of Livogrit using

High-Performance Thin Layer Chromatography (HPTLC) revealed the presence of gallic acid, caffeic acid, quercetin, catechin, rutin, and corilagin metabolites which are known to impart hepatoprotective effects (as shown in Fig. 2).

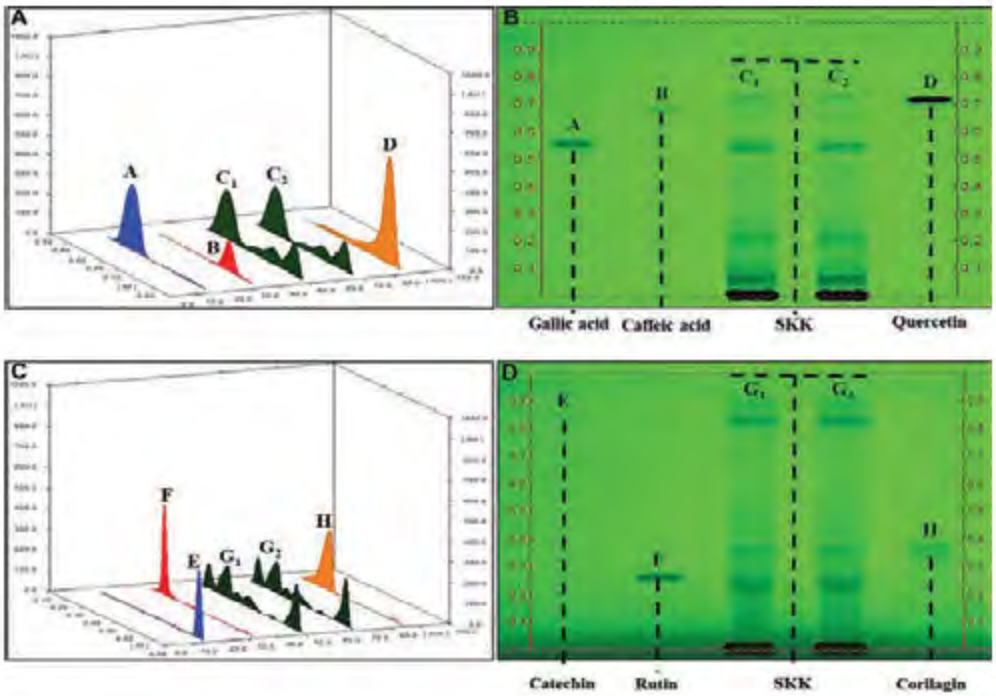


Fig.2 Phytochemical analysis of Livogrit. Response factor of gallic acid (a), caffeic acid (b), and quercetin (d) matches with sample (c1 and c2) at 280 nm (A) and at 254nm (B) through High Performance Thin Layer Chromatography (HPTLC) study. Similarly, response factor of catechin (e), rutin (f) and corilagin (h) matches with sample (G1 and G2) at 280 nm (C) and at 254 nm (D) through HPTLC.

In another study, the hepatoprotective effects of Livogrit in carbon tetrachloride (CCl4) induced liver toxicity were studied. In human hepatocarcinoma (HepG2) cells, co-treatment of Livogrit with carbon tetrachloride reduced the hepatotoxicity induced by the latter. Loss of cell viability; release of hepatic injury enzymatic biomarkers- Aspartate aminotransferase (AST), and Alkaline phosphatase (ALP); and changes in reactive oxygen species and in mitochondrial membrane potentials confirm the finding.

In-vivo safety analysis of Livogrit oral dosing up to 1,000 mg/kg/day for 28 days in Wistar rats showed no loss in animal body weight, feeding habits and no histopathological changes were observed in liver, kidney, heart, brain, and lung. Pharmacologically, in the 9 weeks' study, Livogrit (200 mg/kg) reduced the carbon tetrachloride stimulated increase in the release of enzymes (Alanine transaminase (ALT), Aspartate aminotransferase (AST), and Alkaline phosphatase (ALP)), bilirubin, total

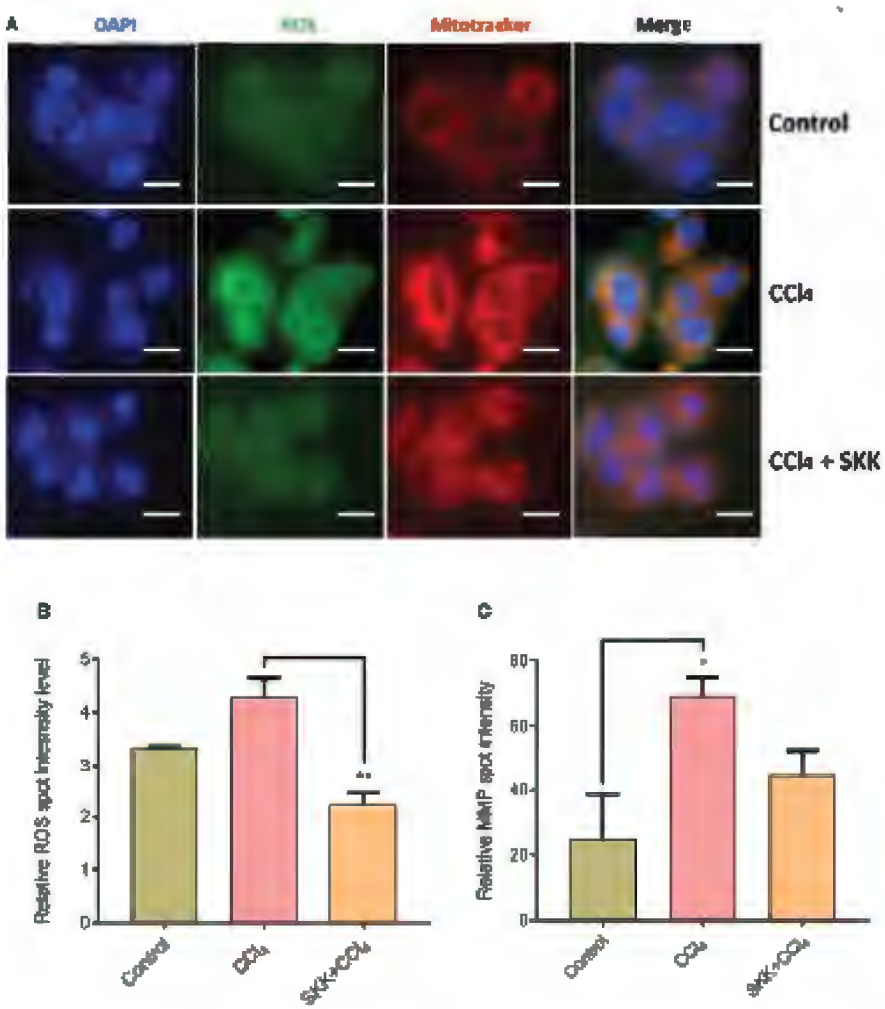


Fig.3 Mitochondrial membrane potential and Reactive oxygen species measurement in Livogrit (Divya Sarva-Kalp-Kwath) and carbon tetrachloride (CCl4) when treated in HepG2 cells: (A) After stimulation with the CCl4 Oxidative stress was induced in the HepG2 cells. Green colour represents intracellular presence of Reactive Oxygen Species (ROS;) and red colour shows an increase in Mitochondrial Membrane Potential (MMP;) determined through High Content Screening (HCS) Studio software based analysis and epifluorescence microscope based imaging. Significant reduction in the production of ROS and MMP was seen in Co-treatment of the HepG2 cells with Livogrit and CCl4. (B) Quantitatively, an upregulation was observed in ROS levels in the CCl4 stimulated HepG2 cells. (C) Similarly, upregulation was seen in MMP in the CCl4 stimulated HepG2 showed an upregulation. In the co-treatment of the HepG2 cells with CCl4 and Livogrit both the parameters showed appreciable reduction. Results are expressed as Mean ± Standard Error of Means. The statistical difference was calculated by using one way analysis of variance (ANOVA) followed by Dunnett's multiple comparison t-test p-value *

cholesterol, and uric acid levels in the Wistar rats as shown in Fig.3. It also reduced liver fibrosis, lymphocytic infiltration, and hyper-plasticity. Therefore, this polyherbal medicine

has shown potential therapeutic effects for decreasing liver toxicity induced by the use of drugs, and other toxins. as shown in Fig.4.

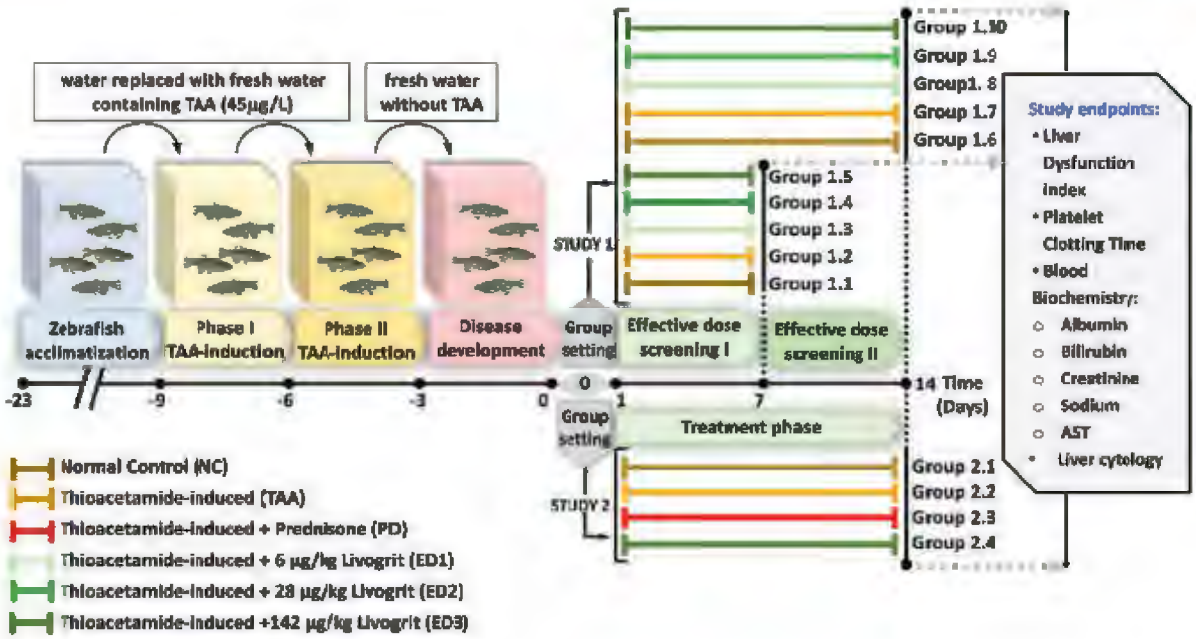


Fig. 4 Illustration of experimental set ups for study design. Experimental set up showing study 1, to screen Livogrit for evaluating the effective dose and in TAA-induced zebrafish model. The treatment was carried for 7 days (effective dose screening I and II) and 14 days of group setting. Study 2 is a another setup to compare the therapeutic effects of Livogrit with another reference drug, prednisone post 14 days of treatment.

Dose and Method of Use of Livogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

https://doi.org/10.1016/j.phyplu.2021.100067
https://www.mdpi.com/1420-3049/25/20/4849
https://www.tandfonline.com/doi/full/10.1080/21655979.2022.2065789
https://pubmed.ncbi.nlm.nih.gov/32269524/
https://doi.org/10.1016/j.toxrep.2022.03.053

Tablet

LIVOGRIT VITAL
लिवोग्रिट वाइटल

Introduction to Liver Diseases:

The liver's health may be supported and protected by compounds known as hepatoprotectives. These substances are frequently investigated for their potential to stop or lessen liver damage brought on by a variety of substances, including toxins, drugs, alcohol, and viral infections. Many hepatoprotectives have antioxidant, anti-inflammatory, and anti-fibrotic effects, though the precise mechanisms of action may differ.

One of the most thoroughly researched hepatoprotective compounds is silymarin, which comes from the milk thistle plant. In diseases including Non-Alcoholic Fatty Liver Disease (NAFLD) and alcoholic liver disease, it has demonstrated encouraging outcomes in preventing oxidative damage to liver cells and lowering inflammation. Through its anti-inflammatory and antioxidant capabilities, the turmeric component curcumin has also exhibited hepatoprotective effects.

A precursor to glutathione, N-acetylcysteine (NAC) has hepatoprotective effects in acetaminophen-induced liver injury and is essential for maintaining cellular redox equilibrium. Researchers have looked into the possibility of using vitamin E, a fat-soluble vitamin with antioxidant capabilities, to lessen the liver damage brought on by oxidative stress and inflammation.

Numerous illnesses that damage the liver are categorised as hepatic disorders, including viral hepatitis, Alcoholic Liver Disease (ALD), Non-Alcoholic Fatty Liver Disease (NAFLD), drug-induced liver injury, and cirrhosis. Inflammation, oxidative stress, fibrosis, and decreased liver function can result from these conditions. It has been investigated if hepatoprotective substances can lessen liver injury and enhance liver health in various circumstances.

Other hepatoprotective agents such as vitamin E, resveratrol, and alpha-lipoic acid have also been investigated for their potential in mitigating liver damage in various hepatic disorders. Vitamin E has shown promise in reducing oxidative stress and inflammation in non-alcoholic fatty liver disease and alcoholic liver disease. Resveratrol, found in grapes and berries, exhibits antioxidant and anti-inflammatory properties, and has shown hepatoprotective effects in viral hepatitis and non-alcoholic fatty liver disease. Alpha-lipoic acid acts as an antioxidant and has shown potential in improving liver function in viral

hepatitis and non-alcoholic fatty liver disease.

An abnormal expansion of the liver is referred to as hepatomegaly. It is a symptom of a liver-related ailment or disease rather than being a sickness in and of itself. Viral infections, alcoholic liver disease, non-alcoholic fatty liver disease, hepatitis, cirrhosis, and liver tumors are just a few of the hepatic conditions that can result in hepatomegaly.

The accumulation of fat in the liver is a symptom of Non-Alcoholic Fatty Liver Disease (NAFLD). Obesity, diabetes, and the metabolic syndrome are linked to it. A more severe form of non-alcoholic fatty liver disease that can result in hepatomegaly and liver fibrosis is Non-Alcoholic Steato-Hepatitis (NASH).

Hepatomegaly can also be a result of liver tumors, including benign tumors like hepatocellular adenoma or malignant tumors such as hepatocellular carcinoma. These tumors can disrupt the normal structure of the liver and lead to its enlargement.

Having an enlarged liver or spleen is a symptom of the disorders hepatomegaly and splenomegaly, respectively. These ailments can be brought on by a number of underlying factors and are frequently linked to infections, systemic diseases, blood problems, liver ailments, and infections.

An enlarged liver is referred to as hepatomegaly. Cirrhosis, Non-Alcoholic Fatty Liver Disease (NAFLD), viral hepatitis, alcoholic liver disease, and liver tumors are a few of the disorders that can cause it. The goal of treatment is to control the underlying cause, whether that be changing one's lifestyle to manage non-alcoholic fatty liver disease or undergoing a liver transplant to treat end-stage liver disease.

Management of hepatomegaly and splenomegaly includes addressing the underlying condition, managing symptoms, and monitoring liver and spleen function. This may involve lifestyle modifications, medications to manage symptoms or treat the underlying cause, and regular monitoring of liver and spleen size and function through imaging and blood tests.

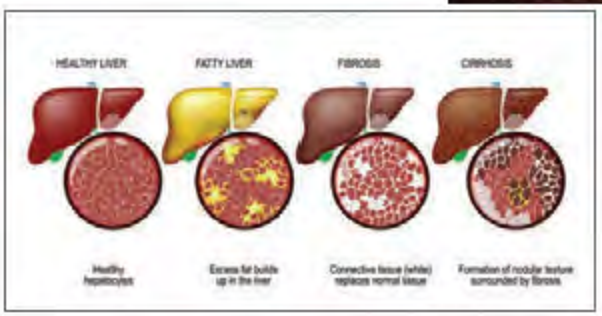
Hepatoprotective measures are essential in managing liver problems and preventing further damage to the liver. These measures aim to protect liver cells, promote liver regeneration, and enhance overall liver function. Some hepatoprotective strategies include lifestyle modifications (such as avoiding alcohol, maintaining a healthy weight, and adopting a balanced diet), avoiding hepatotoxic medications, managing underlying conditions (such as viral hepatitis or metabolic disorders), and using specific hepatoprotective medications or natural remedies. However, it is crucial to consult a healthcare professional for personalized recommendations based on the underlying liver problem.

Ingredients and Medicinal Uses of Livogrit Vital:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Punarnava (Rt.)	*Boerhavia diffusa*	Shoth Har, Mutral	• Anti-inflammatory • Diuretic	230 mg
Bhumi amla (Wl. Pt.)	*Phyllanthus niruri*	Rakta vikara Har, Yakritpliharoga Har	• Alleviates blood disorders • Alleviates diseases of liver and spleen	115 mg
Makoy (Wl. Pt.)	*Solanum nigrum*	Tridoshanashak, Rasayan, Yakritrog Har	• Pacifies all three doshas • Rejuvenating • Alleviates liver diseases	115 mg
Rose hip (Th.) (Vitamin C content: Not less than 50 %w/w)	*Rosa indica*	Hridya, Raktavikar Har	• Cardiotonic • Alleviates blood disorders	40 mg
Spinach (Lf.) (Vitamin B9 content: Not less than 1 %w/w)	*Spinacia oleracea*	Raktdosh Har, Yakritshoth Har	• Alleviates blood disorders • Alleviates inflammation in the liver	5.5 mg
Corn (Sd.) (Vitamin B12 content: Not less than 1 %w/w)	*Zea mays*	Balya	• Strength-promoting	0.6 mg

Livogrit Vital is Useful in:

- **Hepatoprotection**
- **Liver Diseases**



Livogrit Vital: Description in Classical Texts:

Punarnava is mentioned under Guduchyadi varga in Bhava prakasha. It is sweet, bitter and astringent in taste. It pocess the qualities of lightness and dryness. It's vipaka is katu and this drug is hot in potency. It pacifies kapha and vata doshas. It has anti-inflammatory and increases digestive power.

Bhumi amla has bitter, astringent and sweet tastes with light and dry properties. It has madhura vipaka and pacifies kapha and pitta doshas.

Makoy is bitter in taste with lightness and slimyness; having neither hot nor cool potency and katu vipaka. It pacifies all three doshas.

Rosehip has pungent, bitter, astringent and sweet tastes with qualities of lightness and unctuousness; cold potency and madhura vipaka. It pacifies all three doshas.

Spinach is pungent and sweet in taste with cold potency and heavy property. It has a laxative action as well and increases vata dosha. It is useful to treat digestion related issues.

Corn is considered as pacifying pitta dosha and said to have a calming effect as well.

Scientific Evidence of Livogrit Vital:

Livogrit vital was evaluated at Patanjali Research Foundation facility against isoniazid-induced liver injury. Incidences of Tuberculosis (TB) have risen globally and so is the use of the first line anti-TB drug isoniazid. Hepatotoxicity is a well-known adverse effect in patients consuming isoniazid. Livogrit vital is a polyherbal medicine fortified with vitamins which act in synergy to protect liver against toxicants. The phytochemical evaluation of Livogrit vital was performed by High Performance Liquid Chromatography (HPLC). Human hepatocyte cells (HepG2) were used for the in vitro evaluation of Livogrit vital against isoniazid-induced hepatotoxicity. Livogrit vital was found to be cytosafe at all physiologically relevant concentrations. It also decreased hepatocyte injury induced by isoniazid in a concentration-dependent manner. The release of liver injury biomarkers namely ALT and GGT due to isoniazid decreased in presence of Livogrit vital treatment. Oxidative stress is majorly responsible for isoniazid-induced hepatic injury. Livogrit vital was found to decrease the levels of reactive oxygen species and lipid peroxidation which are the major markers of oxidative stress. On the basis of IRE-1α gene expression, caspase enzymatic activity and cleaved PARP1 protein levels it was observed that Livogrit vital ameliorated isoniazid-induced endoplasmic reticulum stress and apoptosis in hepatocytes. Furthermore, HPLC based analysis of isoniazid-induced and Livogrit vital treated hepatocytes was performed wherein it was found that the intracellular levels of isoniazid and hydrazine (toxic metabolite of isoniazid) were decreased in Livogrit vital treated groups. Taken together, Livogrit vital is a potent therapeutic option to prevent liver disorders like hepatotoxicity induced by anti-TB therapy.

As Livogrit vital is a unique combination of

herbal extracts that are not only enriched with phytochemical but also with vitamins like ascorbic acid (vitamin C), folate (vitamin B9) and cobalamin (vitamin B12). Ultra High Performance Liquid Chromatographic (UHPLC) study confirms the presence of these vitamins along with gallic acid, methyl gallate, corilagin, chlorogenic acid, ellagic acid, rutin, cinnamic acid, and boeravinone B, as shown in Fig. 1.

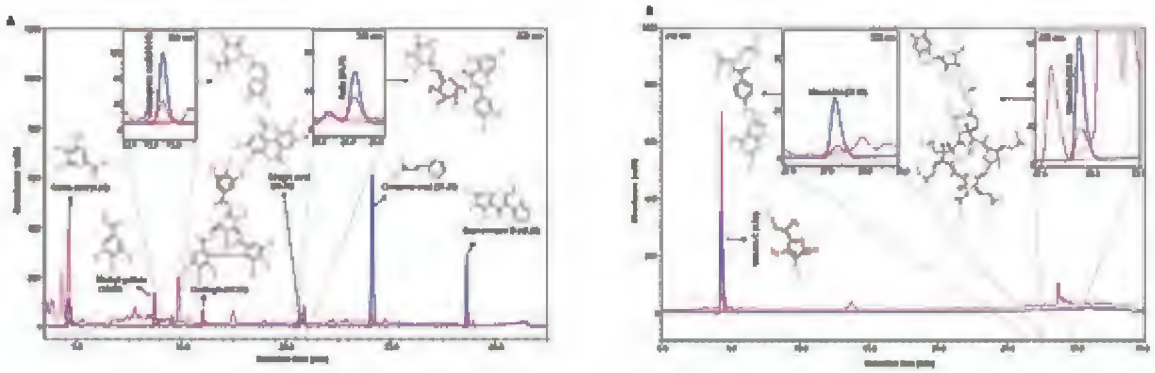


Fig. 1 Ultra High Performance Liquid Chromatographic (UHPLC) study confirms the presence of phytochemical that include (A) gallic acid, methyl gallate, corilagin, chlorogenic acid, ellagic acid, rutin, cinnamic acid, boeravinone B along with (B) vitamin C, vitamin B12 and vitamin B9 from natural source.

Dose and Method of Use of Livogrit Vital:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

LIVAMRIT ADVANCE
लिवामृत एडवांस

Introduction to Liver Diseases:

The liver is a crucial organ that performs key processes such as protein synthesis, detoxification, metabolism, and bile generation. The term "liver disease" refers to a broad spectrum of illnesses that can impact the structure and operation of the liver. These conditions might be minor and self-limiting or persistent and lethal.

Liver disease, also known as hepatic steatosis, is a condition characterized by the accumulation of excess fat in the liver cells. It can be categorized into two types: Alcoholic Fatty Liver Disease (AFLD) and Non-Alcoholic Fatty Liver Disease (NAFLD). Alcoholic fatty liver disease is caused by excessive alcohol consumption, while non-alcoholic fatty liver disease is associated with metabolic factors such as obesity, insulin resistance, and high blood sugar levels. Both types can progress to more severe conditions like liver fibrosis and cirrhosis. Lifestyle modifications, including weight loss, exercise, and a healthy diet, are crucial for managing fatty liver disease. Regular medical supervision and treatment are recommended. The burden of liver disease in India is significant because it alone contributed to 18.3% of the two million global liver disease–related deaths in 2015.

Viral infections, excessive alcohol use, metabolic problems, autoimmune diseases, genetic abnormalities, and drug-induced liver injury are only a few of the causes of liver disease. Hepatitis viruses A, B, C, D, and E can cause viral hepatitis, which is a significant cause of liver disease globally. Alcoholism can cause alcoholic liver disease, whereas metabolic diseases such Non-Alcoholic Steato-Hepatitis (NASH), Non-Alcoholic Fatty Liver Disease (NAFLD), and insulin resistance are linked to obesity, insulin resistance, and diabetes. Examples of liver conditions with genetic underpinnings include alpha-1 antitrypsin deficiency, Wilson's disease, and autoimmune hepatitis. Certain drugs, herbal supplements, and poisons can cause liver damage that is drug-induced.

Due to increased amounts of bilirubin in the blood, jaundice is a disorder that causes the skin and eyes to turn yellow. Hepatitis, cirrhosis, or bile duct obstruction are just a few of the liver conditions that might cause it. To find the underlying reason and treat it, prompt diagnosis and adequate management are essential. Indigestion is characterized by discomfort or soreness in the upper abdomen that is frequently accompanied by a sense of fullness, bloating, or heartburn. Overeating, eating too soon, and certain medical conditions are just a few of the causes.

Diagnosis of liver diseases involves a

combination of clinical evaluation, laboratory tests, imaging techniques, and liver biopsy. Common laboratory tests include Liver Function Tests (LFTs) to assess liver enzymes, bilirubin levels, and albumin. Additional tests such as viral serology, autoimmune markers, and genetic testing may be performed to identify specific causes. Imaging modalities like ultrasound, Computed Tomography (CT), and magnetic resonance imaging (MRI) help evaluate liver structure and detect abnormalities. Liver biopsy remains the gold standard for definitive diagnosis, providing histological assessment of liver tissue. These diagnostic approaches are outlined in guidelines from professional organizations such as the American Association for the Study of Liver Diseases (AASLD) and the European Association for the Study of the Liver (EASL).

The treatment of liver diseases depends on the specific condition and its underlying cause. It may involve lifestyle modifications, medications, and in some cases, surgical interventions. For example, viral hepatitis may be treated with antiviral medications, while autoimmune hepatitis may require immunosuppressive drugs. Non-alcoholic fatty liver disease (NAFLD) may benefit from weight loss, exercise, and dietary changes. In advanced liver diseases such as cirrhosis or liver cancer, liver transplantation might be necessary. Treatment approaches are constantly evolving, and the recommendations provided by professional organizations like American Association for the Study of Liver Diseases (AASLD) and the European Association for the Study of the Liver (EASL) serve as valuable resources for guiding clinical decisions.

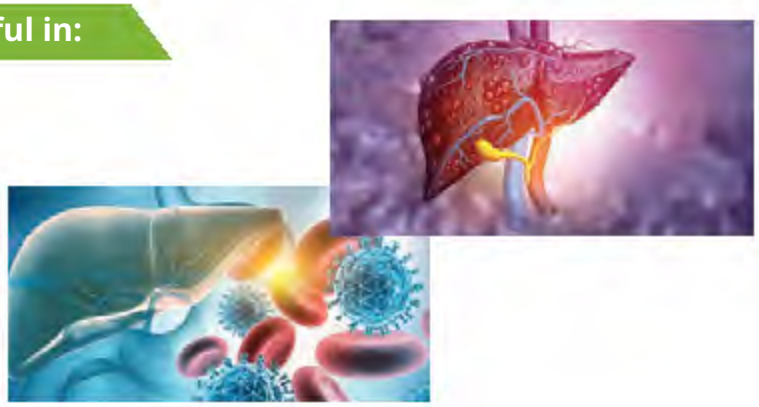
Ingredients and Medicinal Uses of Livamrit Advance:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry extract of:				
Bhumi Amla (Wl. Pt.)	*Phyllanthus niruri*	Raktvikar Har, Yakritpliharog Har	• Alleviates iseases due to vitiation of bood • Alleviates diseases of liver and spleen	60 mg
Makoy (Fr.)	*Solanum nigrum*	Tridoshnashak, Rasayan, Yakritpliharo Har	• Pacifies all three doshas • Rejuvenating • Alleviates diseases of liver and spleen	60 mg
Daruhaldi (St.)	*Berberis aristata*	Yakritpliha Vriddhi Har	• Alleviates hepatosplenomegaly	25 mg
Kasani (Wl. Pt.)	*Cichorium intybus*	Rechan, Yakrit Pleeha Vriddhi Har	• Mild laxative • Alleviates hepatosplenomegaly	60 mg
Dronpushpi (Wl. Pt.)	*Leucas cephalotus*	Kaamla Har	• Alleviates jaundice	25 mg
Punarnava (Wl. Pt.)	*Boerhavia diffusa*	Yakrit Shoth Har,	• Alleviates hepatomegaly	60 mg
Atibala (Ft.)	*Abutilon indicum*	Bal Kaarak, Mridu Virechak	• Gives strength • Mild laxative	25 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Erand (Sd.)	*Ricinus communis*	Agnimandya Prashman	• Alleviates indigestion	25 mg
Giloy (St.)	*Tinospora cordifolia*	Tridosh Har, Yakrit Kriya Niyamak	• Pacifies all three doshas • Regulating liver function	25 mg
Kalmegh (Wl. Pt.)	*Andrographis paniculata*	Yakrit Uttejak, Jwarghna	• Stimulates liver • Alleviates Fever	25 mg
Sonapatha (Rt.)	*Oroxylum indicum*	Shoth Har	• Reduces swelling	25 mg
Sharpunkha (Rt.)	*Tephrosia purpurea*	Yakrit Vriddhi Har	• Alleviates hepatomegaly	50 mg
Fine Powder of:				
Kutki (Rz.)	*Picrorhiza kurroa*	Bhedan, Yakrit Vriddhi Har	• Alleviates hepatomegaly	85 mg

Livamrit Advance is Useful in:

- **Fatty Liver**
- **Hepatitis**
- **Loss of Appetite**
- **Anemia**
- **Jaundice.**



Livamrit Advance: Description in Classical Texts:

It is an Ayurvedic proprietary medicine which is prepared with the herbs used traditionally in Ayurveda for the management of Liver diseases.

Bhumi Amla is sweet, bitter, astringent in taste; with the qualities of heaviness and dryness. This drug is cold in potency; and pacifies pitta, kapha doshas while aggravating vata dosha; and can alleviate indigestion, thirst, cough, blood diseases, eczema and phthisis.

Makoy extract is pungent and bitter in taste with physical property of unctuousness; and hot in potency and pacifies vata, pitta and kapha doshas. This drug can alleviate indigestion,

thirst, polyuria, hiccough, skin diseases, and heart ailments.

Daruhaldi extract is pungent and bitter in taste. The physical property is dryness. It has hot potency and pacifies pitta dosha. This drug can alleviate throat diseases, eye and ear ailments.

Kasani is bitter in taste with qualities of lightness and dryness; having hot potency and katu vipak. This drug is pacifying kapha and pitta doshas.

Kutki is pungent in taste; with properties of lightness, dryness and sharpness; having madhur vipaka and cold potency. It pacifies pitta, kapha doshas and helps in management of indigestion, thirst, polyuria, blood diseases and skin diseases.

Dronpushpi is sweet and pungent in taste with properties of heaviness and dryness. This drug is hot in potency and aggravates pitta dosha. It can alleviate jaundice, edema, polyuria and fever and also has laxative effect.

Punarnava extract is bitter in taste. The physical property is lightness. It's vipaka is katu and potency is cold. It pacifies pitta, kapha doshas and aggravates vata dosha; alleviates blood diseases.

Atibala extract is bitter in taste. Physical Property is unctous and cold potency. It pacifies vata pitta, doshas and alleviates blood diseases, ulcer, polyuria. It's action is astringent, tonic.

Erand extract is sweet in taste. Physical Property is heaviness. This drug is hot in potency and pacifies kapha dosha It can cure blood diseases.

Giloy extract is pungent, bitter, astringent, in taste. Physical property is lightness. It's vipaka is madhur and this drug is hot in potency. Pacifies vata, pitta, kapha doshas; and helps in alleviating skin diseases, headache, edema, hernia, flatulence, rheumatism, anemia, jaundice, fever.

Kalmegh is bitter in taste;with dryness and lightness and katu vipaka with ablity to pacify kapha and pitta doshas.

Sonapatha is bitter, astringent in taste; with katu vipaka and cold potency. It pacifies vata, pitta, kapha doshas; and act as an appetizer and astringent.

Sharpunkha extract is bitter, astringent, in taste. Physical property is lightness. It can cure liver diseases, blood diseases, poisoning, ulcer, spleen diseases, and abdominal tumor.

Scientific Evidence of Livamrit Advance:

The efficacy of Livamrit Advance has been evaluated in rat model of cholestasis induced by α-naphthylisothiocyanate (ANIT), wherein oral administration of a single dose of α-naphthylisothiocyanate led to elevations in the serum levels of aspartate transaminase, alanine transaminase, gamma-glutamyl transferase, alkaline phosphatase, total bilirubin and total bile acids, when compared to normal animals. In addition, histopathological examination of the liver revealed moderate infiltration of inflammatory cells in the liver, tissue necrosis and fibrosis of the hepatic portal vein. Furthermore, the expression of

genes associated with cholestatic liver injury namely, Bax, TGFβ1, MMP-9 and α-SMA were also elevated. All these features closely resemble cholestasis in humans. Livamrit Advance administered prophylactically by oral route prevented the development of α-naphthylisothiocyanate -induced impairment in liver enzymes, bile acids, hepatic lesions and biomarkers associated with cholestasis in a dose-dependent manner. Accordingly, Livamrit Advance possesses clinico-therapeutic potential in the management of cholestasis.

Analysis of Livamrit Advance was done with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Livamrit Advance, the different marker compounds were obtained at 270 nm wavelength namely gallic acid at 8.425 minutes, 5-hydroxyl methyl furfural (5-HMF) at 10.456 minutes, vanillic acid at 23.099 minutes, palmatic acid at 31.258 minutes, berberine at 31.735 minutes, picroside I at 37.500 minutes, picroside II at 49.199 minutes, and cinamic acid at 57.349 minutes. In the chromatograms shown in Fig. 1, the dark blue line shows the standards and red line indicates the test sample.

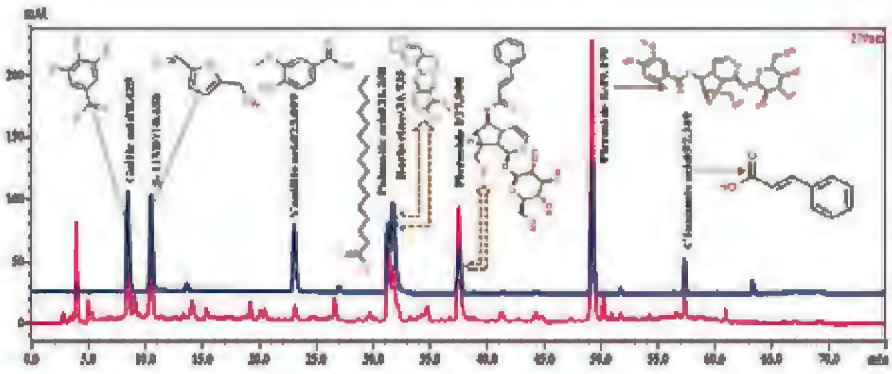


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Livamrit Advance. In Livamrit Advance, the compounds were obtained at 270 nm wavelength mainly: gallic acid (8.425 minutes), 5-hydroxyl methyl furfural (5-HMF) (10.456 minutes), vanillic acid (23.099 minutes), palmatic acid (31.258 minutes), berberine (31.735 minutes), picroside I (37.500 minutes), picroside II (49.199 minutes), and cinamic acid (57.349 minutes). In the chromatograms, the dark blue line shows the standards and red line indicates the test sample.

Dose and Method of Use of Livamrit Advance:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Before meals
Or as directed by the physician.	

Tablet

COLOGRIT कोलोग्रिट

ENTERIC COATED एंट्रिक कोटेड

Introduction to Ulcerative Colitis, Diarrhea, Dysentery, General Abdominal Diseases, and Gastric Discomfort:

Ulcerative Colitis (UC) is a chronic inflammatory bowel disease (IBD) that primarily affects the large intestine (colon) and rectum. It is characterized by inflammation and ulceration of the inner lining of the colon, leading to various symptoms and complications. Ulcerative colitis is a complex condition with multifactorial causes and no known cure. In this introduction, we will explore the key aspects of ulcerative colitis, including its symptoms, causes, diagnosis, treatment, and management strategies.

The exact cause of ulcerative colitis remains unknown, but it is believed to involve a combination of genetic, environmental, and immune system factors. Genetic predisposition plays a role, as individuals with a family history of Ulcerative colitis are at a higher risk. Environmental triggers, such as certain infections or dietary factors, may also contribute to the development of the disease. The immune system, which normally protects the body from harmful substances, mistakenly attacks the intestinal lining, leading to inflammation and tissue damage. The symptoms of Ulcerative colitis can vary in severity and may include abdominal pain, cramping, diarrhea (often with blood or mucus), rectal bleeding, urgency to have a bowel movement, fatigue, weight loss, and loss of appetite. The disease can have a significant impact on a person's quality of life, causing disruptions in daily activities, work, and social interactions. Diagnosing ulcerative colitis involves a combination of medical history assessment, physical examination, laboratory tests, and imaging studies. The goal of treatment is to induce and maintain remission, reduce symptoms, and improve the quality of life for individuals with Ulcerative colitis.

Treatment plans are individualized based on the severity and extent of the disease, as well as the person's overall health. Medications are the primary treatment option and may include aminosalicylates, corticosteroids, immunomodulators, and biologic therapies. These medications help reduce inflammation, suppress the immune system, and promote healing of the intestinal lining.

Diarrhea is characterized by frequent loose or watery bowel movements. It is a common condition that can be caused by various factors, including viral or bacterial infections, food poisoning, certain medications, food intolerances, and underlying gastrointestinal disorders. The main symptom of diarrhea is the passage of loose stools more than three times a day. Other associated symptoms may include abdominal cramps, bloating, nausea,

and dehydration. Treatment typically involves fluid replacement to prevent dehydration and, in some cases, medication to control symptoms or treat the underlying cause. Dysentery is a more severe form of diarrhea characterized by bloody stools and abdominal pain. It is primarily caused by bacterial or parasitic infections, such as Shigella, Salmonella, or *Entamoeba histolytica*.

Dysentery can be highly contagious and is often associated with poor sanitation and hygiene. In addition to bloody stools and abdominal pain, individuals with dysentery may experience fever, vomiting, and a general feeling of malaise. Treatment usually involves antibiotics or antiparasitic medications, along with supportive measures to manage symptoms and prevent dehydration. General abdominal diseases encompass a wide range of conditions that affect the organs and structures in the abdominal cavity. These may include appendicitis, gallstones, pancreatitis, gastroenteritis, Irritable Bowel Syndrome (IBS), and Inflammatory Bowel Disease (IBD), among others. Symptoms can vary depending on the specific condition but may involve abdominal pain, bloating, changes in bowel habits, nausea, vomiting, and weight loss. Diagnosis typically involves a combination of medical history assessment, physical examination, laboratory tests, imaging studies, and sometimes endoscopic procedures. Treatment options vary depending on the underlying cause and may involve medications, lifestyle modifications, dietary changes, or surgical intervention.

Gastric discomfort refers to a range of symptoms associated with the stomach, including indigestion, bloating, heartburn, and stomach pain. It can be caused by factors such as overeating, consuming spicy or fatty foods, stress, certain medications, or underlying conditions like Gastro-Esophageal Reflux Disease (GERD) or peptic ulcers. Symptoms of gastric discomfort can significantly impact a person's quality of life and may include a feeling of fullness, belching, regurgitation, or a burning sensation in the chest or upper abdomen. Treatment typically involves lifestyle modifications (e.g., dietary changes, weight management, stress reduction), medications to reduce stomach acid or promote digestion, and, in some cases, antibiotics to treat underlying bacterial infections.

Ingredients and Medicinal Uses of Cologrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Fine Powder of:				
Bel (Fr.)	*Aegle marmelos*	Mridivirechaka, Kupachan Har	• Mild Laxative • Helps in digestion	190 mg
Kutaj (Bk.)	*Holarrhena antidysenterica*	Atisar Har	• Useful in Diarrhoea	95 mg
Jeera (Sd.)	*Cuminum cyminum*	Pachak, Atisar Har	• Helps in digestion, • Useful in Diarrhoea	38 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Ajwain (Fr.)	*Trachyspermum ammi*	Agnideepak, Pachak	• Improves and helps in digestion	19 mg
Sounf (Fr.)	*Foeniculum vulgare*	Deepan, Pachan	• Improves and helps in digestion	19 mg
Gulab (Fl.)	*Rosa centifolia*	Pachan, Poushtik	• Helps in digestion, • Helps in nourishing	12 mg
Kapur extract (Lf.)	*Cinnamomum camphora*	Sheetal, Durgandh Har	• Helps in relieving the Burning sensation	8 mg

Cologrit is Useful in:

- **Ulcerative Colitis**
- **General Abdominal Diseases**
- **Diarrhoea**
- **Dysentery**
- **Gastric Discomfort**

Cologrit: Description in Classical Texts:

Cologrit Enteric Coatd tablet is prepared by combining Ayurvedic drugs that are highly beneficial for gastro intestinal diseases. The ingredients in Cologrit are useful in management of severe diarrhea, dysentery, general abdominal disorders, gastric discomfort and inflammatory bowel disease. In an Ayurvedic text Bhavaprakasha Nighantu, the description of the herbs Bel, Kutaj, Jeera, Ajwain, Sounf, Gulab and kapur are given with the qualities of improving digestion, increasing appetite, relieving from burning sensation, and nourishing the depleted tissues.

Bel is mentioned under Guduchyadi varga of Bhava prakasha and has astringent and bitter tastes with the quality of lightness and a hot potency. This drug pacifies vata and kapha doshas; and increases pitta dosha. It increases the power of digestion. Kutaj is mentioned under Guduchyadi varga in Bhava prakasha. This herb has the qualities of dryness and possesses pungent, astringent tastes with cold potency. It pacifies kapha dosha and alleviates conditions like hemorrhoids, diarrhea and accumulated metabolic wastes in the body.

Jeera is pungent in taste, having the qualities of

lightness and dryness in it. It increases digestive power, alleviates vomiting, diarrhea, abdominal tumors and abdominal distension. Ajwain/ Ajamoda is pungent in taste, hot in potency, has the qualities of lightness and sharpness; and pacifies kapha and vata doshas. It can alleviate conditions like indigestion, vomiting and hiccough.

Saunf/Mishreya has sweet, pungent and bitter tastes and madhura vipaka with a hot potency and has the qualities of lightness and dryness. It is able to pacify vata and kapha doshas and effective in vomiting, hyperacidity. This drug increases digestive power.

Gulab as mentioned under pushpa varga by Bhava prakasha is of cold potency with the quality of lightness; having pungent and bitter tastes with the ability to increase digestive power. It pacifies all three doshas. Kapur has sweet and bitter tastes with a cold potency having the ability to alleviate kapha and pitta doshas. It can alleviate burning sensation, anorexia and has anti-toxic activity.

Scientific Evidence of Cologrit:

Patanjali Research Foundation has studied the efficacy of the enteric-coated 'Cologrit' (EC) tablet in alleviating Ulcerative colitis -like inflammation. Through the modulation of NFκB (Nuclear factor kappa B) activity in Cologrit action it lessened inflammation in LPS (lipopolysaccharide) -induced transformed THP-1 macrophages, and TNF-α-stimulated human colorectal (HT-29) cells, IL-6 (Interleukin 6) production, and NFκB, IL-1β (Interleukin-1β), IL-8 (Interleukin 8), and CXCL5 (C-X-C motif chemokine ligand 5) mRNA expression levels. In cologrit an additional observation of reduction in human monocytic (U937) cell adhesion to HT29 cells was seen. Small intestine EC digestae effectively reduced dextran sodium sulfate (2.5% w/v)-induced cell viability loss and oxidative stress in human colon epithelial Caco-2 (Cancer coli-2) cells. Through the regulation of TNF-α/NFκB/IL6 signaling axis, the enteric-coated (EC) Cologrit tablets shown good small intestine-specific phytochemical delivery capability, as well as decreased UC-like inflammation, and oxidative stress. Therefore, this study investigated the efficacy of the enteric-coated (EC) 'Cologrit' tablet in alleviating UC-like inflammation. Cologrit is prepared using polyherbal extracts according to ancient Ayurveda scriptures. Phytochemical studies had shown the presence of ellagic acid, gallic acid, rutin, and imperatorin, as shown in Fig. 1.

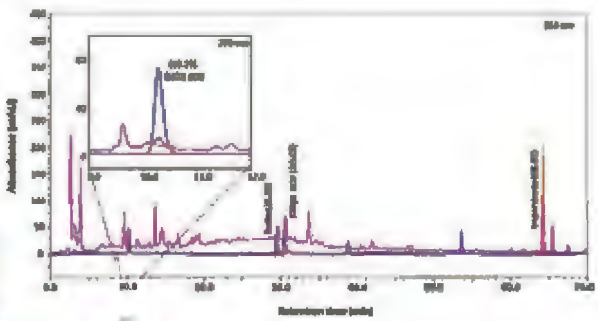


Fig. 1 Phytochemical analysis of Cologrit enteric coated tablet. High Performance Liquid Chromatography (HPLC) analysis confirms the presence of gallic acid at 270 nm wavelength, rutine, ellagic acid, and imperatorin at 253 nm wavelength.

Through the modulation of NFκB activity in Cologrit action it lessened inflammation in LPS-induced transformed THP-1 macrophages, and TNF-α-stimulated human colorectal (HT-29) cells, IL-6 production, and NFκB, IL-1β, IL-8, and CXCL5 mRNA expression levels. In cologrit an additional observation of reduction in human monocytic (U937) cell adhesion to HT29 cells was seen. Methacrylic acid-ethylacrylate copolymer-coating of the Enteric-Coated) Cologrit tablets supported their dissolution, and the release of phytochemicals in the small intestine pH 7.0 environment in a simulated gastrointestinal digestion model, as shown in Fig. 2.

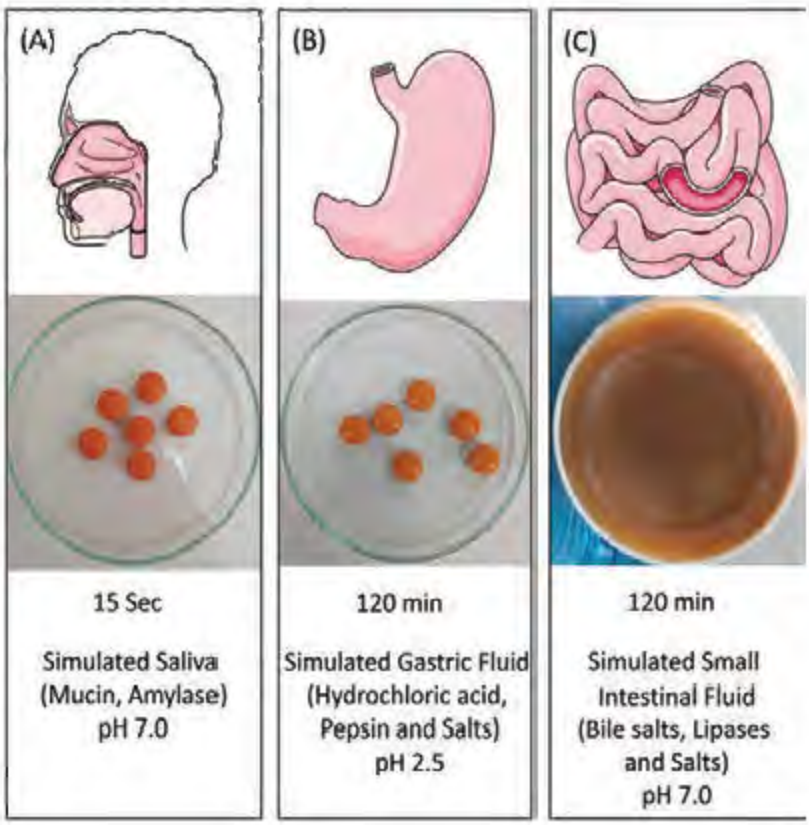


Fig. 2 Representation of In vitro enzymatic digestion of EC Cologrit tablets in simulated gut model. Cologrit formulation was tested for solubility in the (A) Oral cavity (pH 7.0) for 15s, (B) In gastrum (pH 2.5) for 120 min, and (C) In Colon (pH 7.0) for 120 min.

Small intestine Enteric-Coated (EC) digestae effectively reduced dextran sodium sulfate (2.5% w/v)-induced cell viability loss and oxidative stress in human colon epithelial Caco-2 cells. Through the regulation of TNF-α/NFκB/IL6 signaling axis, the Enteric-Coated (EC) Cologrit tablets shown good small intestine-specific phytochemical delivery capability, as well as decreased UC-like inflammation, and oxidative stress.

Cologrit showed anti-inflammatory properties against bacterial lipopolysaccharide driven production of soluble TNF-α and IL-6 in the PMA-transformed THP1 macrophages. We

could successfully able to showcase the release of ingredients of tablets at pH 7.0 using an in vitro GIT digestion model along with Ulcerative collitis and High Performance Liquid Chromatography (HPLC) analysis using photo diode array detection. The biological activity was enhanced when the controlled release of the phytochemicals Gallic acid, Ellagic acid and Rutin, as shown in Fig. 3 at the site of Ulcerative colitis inflammation, which is evident by showing cell protection against loss of cell viability and oxidative stress clearly when seen in DSS stimulated Caco-2 cells.

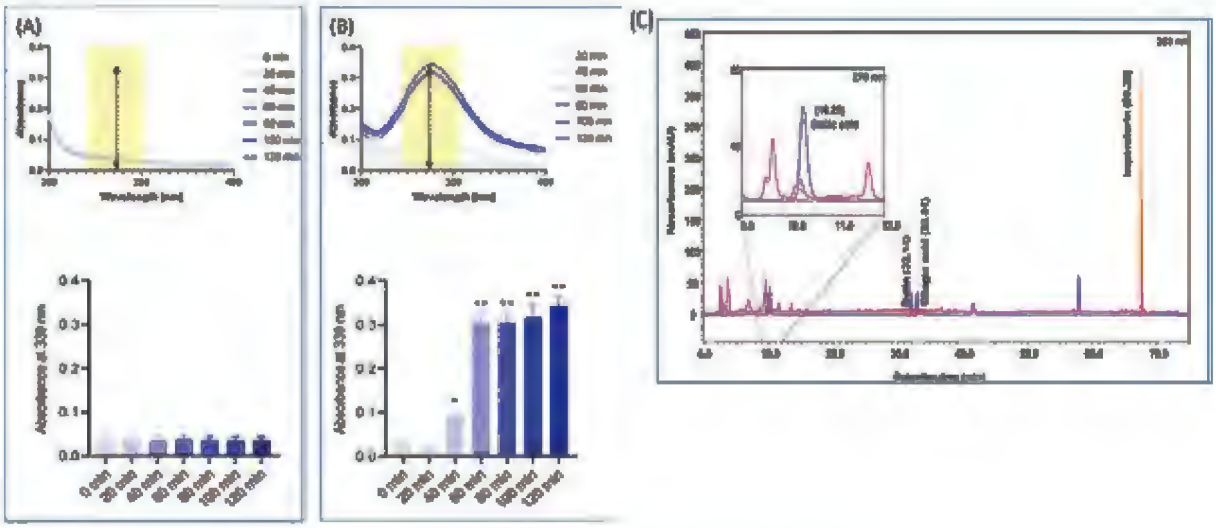


Fig. 3 Ultra Voilet (UV) spectroscopy and High Performance Liquid Chromatography (HPLC) of in vivo digested Cologrit enteric coated (EC) tablets. UV absorbance scan between 300-400 nm wavelength was conducted to study the solubilization of EC tablet at different time periods. The solubilization in (A) stomach phase, and (B) intestinal phase was evaluated at 399 nm wavelength. (C) HPLC analysis of the 120 minute Intestinal phase solubilized Cologrit EC tablet confirms the presence of gallic acid at 270 nm wavelength, rutine, ellagic acid, and imperatorin at 253 nm wavelength.

Dose and Method of Use of Cologrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://doi.org/10.3390/ph16010063

Tablet

PhyTer फाइटर

The Goodness of TRIPHALA

Introduction to Constipation, Hyperacidity, Anorexia And Indigestion:

Constipation is a condition that affects the gastrointestinal tract and can cause painful, stiff, and infrequent faeces. Constipation can be acute (usually lasting less than a week) or chronic (generally lasting more than four weeks or, by the standards of the consensus, more than three months). The most common cause of chronic constipation is a primary disturbance of bowel function, also known as primary chronic constipation, which can be brought on by dietary factors, lifestyle factors, or a disorder of colonic propulsion or rectal emptying. Secondary chronic constipation can be brought on by medications like opioids or antihypertensive drugs, biological disorders like hypothyroidism or Parkinson's disease, or local pathologies in the colon such diverticular stricture or colon cancer.

Constipation impacts both adults and children equally in the world, varying rates of prevalence depend on the parameters used to define constipation. It seems to be more common in persons like female, elderly, having high body mass indices, and low socioeconomic position. The first line of treatment is non-pharmacological like healthy diet, consuming enough fiber, and exercising. If treatment is ineffective, pharmaceutical intervention should be initiated i.e. pharmacological drugs including laxatives, serotonergic agonists, and many others. For many medical professionals, constipation is a serious annoyance because of how frequently it occurs, how expensive medical care is, and how it lowers quality of life. As a result, more care must be taken to develop medications that are more effective, have fewer side effects, and are less likely to interact with other medications.

Hyperacidity is a condition that has been used to describe highly acidic gastric juice, a very free flow of acidic gastric juice, and a group of clinical symptoms including fullness, distress, and burning in the epigastrium that are occasionally linked to the regurgitation of "acid" material. The inflammation of the stomach lining known as hyperacidity, commonly referred to as gastritis or acid reflux, is typically brought on by a bacterial infection or other lifestyle choices like drinking alcohol. People all over the world are affected with a prevalent medical illness known as Gastro-Esophageal Reflux Disease (GERD) or hyperacidity. Because of its high incidence, negative impact on quality of life, and high cost, it is ranked as the fourth most common chronic illness seen in primary care There are many Over-The-Counter (OTC) and prescription drugs that can treat GERD-related oesophageal damage and ease its symptoms. They consist of

proton pump inhibitors, sucralfate, prokinetics, histamine H2-receptor antagonists (H2RA), antacids, and alginates.

All current recommendations include starting with lifestyle changes. Treatment guidelines advise using the "step" treatment programs (step-up and step-down) to manage GERD symptoms if they don't work. Being symptom-free is a reliable sign of ongoing remission. To obtain the lowest rates of relapse and clinical progression of GERD, treatment with drugs that provide a high level of symptom relief is advised.The phrase most frequently used to describe digestive issues is indigestion (or dyspepsia). The word's original meaning is "difficulty in digestion." However, in terms of modern medicine, it denotes a state that happens "when alimentary processes, which are normally unconscious, obtrude themselves into the consciousness". It includes problems with the appetite, heartburn, nagging discomfort in the abdomen, discomfort, nausea, vomiting, flatulence, and any other unpleasant symptoms that the patient associates with their gastrointestinal system. Changes in lifestyle may reduce indigestion avoiding foods that cause heartburn, eating five or six tiny meals daily as opposed to three substantial ones, lowering or stopping the consumption of alcohol and caffeine, avoiding some painkillers such aspirin, ibuprofen (Advil, Motrin IB, and other brands), and naproxen sodium (Aleve), locating substitutes for drugs that cause indigestion, Managing anxiety and stress.

Anorexia is an eating problem that results in persons weighing less than is normal for their height and age, typically through rapid weight loss. Even when they are underweight, those who suffer from this illness may have a severe dread of gaining weight. They might diet, exercise excessively, or employ other weight-loss strategies. Anorexia's precise origins are unknown. Numerous variables might be at play. Hormones and genes might be involved. There may also be a role for social attitudes that support extremely thin body forms. Anorexia can be treated using psychotherapy, the Maudsley approach, medications, nutrition counselling, and other methods. All of these professionals working together to provide a thorough treatment that addresses the physical, emotional, and behavioural elements is frequently the best treatment strategy.

Ingredients and Medicinal Uses of PhyTer:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Extract of:				
Amla (Fr.)	*Phyllanthus emblica*	Mrduvirechak, Rochak, Tridosha Har	• Mild laxative • Taste enhancing • Alleviates all three doshas	155 mg
Harad (Fr. Rd.)	*Terminalia chebula*	Vibandh Har, Mrduvirechak, Tridosha Har, Agni Vardhak	• Alleviates constipation • Mild laxative • Alleviates all three doshas • Increases digestion	155 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Baheda (Fr. Rd.)	*Terminalia bellerica*	Virechak, Udarvikar Har	• Laxative • Alleviates ascitis	155 mg

PhyTer is Useful in:

- **Constipation**
- **Hyperacidity**
- **Anorexia**
- **Indigestion**

PhyTer: Description in Classical Texts:

PhyTer is an Ayurvedic proprietary medicine useful in gastric problems like constipation, acidic regurgitation. Bhavaprakasha has included Triphala under Hareetakyadivarga. It pacifies kapha pitta doshas. It alleviates meha, kushta and vishamajwara. It promotes digestion and acts as slight laxative also. It enhances taste perception as well.

Amla is a mild laxative, taste enhancing, and alleviates all three doshas. Harad alleviates constipation, mild laxative, alleviates all three doshas, and increases digestion. Baheda is laxative, and alleviates ascites.

Scientific Evidence of PhyTer:

PhyTer tablet was characterized by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In the analysis of PhyTer tablet, the chromatogram showed the presence of different compounds at 270 nm wavelength mainly gallic acid at 6.54 minutes, methyl gallate at 20.18 minutes, corilagin at 33.91 minutes, chebulegic acid at 49.16 minutes, penta gallyol glucose at 56.37 minutes, and chebulinic acid at 57.14 minutes; at 253 nm wavelength ellagic acid at 51.69 minutes. In the chromatograms, the blue line represents the mix standards and pink line shows the test sample, as shown in Fig. 1.

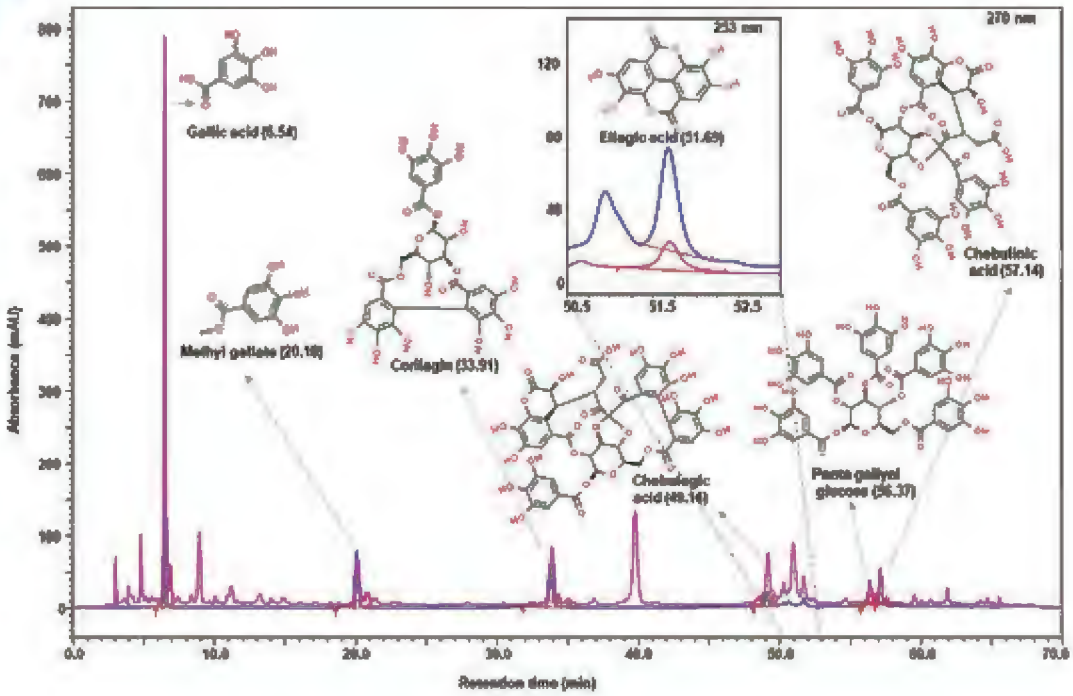


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of PhyTer tablet. In PhyTer tablet analysis, the several compounds were observed at 270 nm wavelength generally gallic acid (6.54 minutes), methyl gallate (20.18 minutes), corilagin (33.91 minutes), chebulegic acid (49.16 minutes), penta gallyol glucose (56.37 minutes), and chebulinic acid (57.14 minutes); at 253 nm wavelength ellagic acid (51.69 minutes). In the chromatograms, the blue line shows the mix standards and pink line indicates the test sample.

Dose and Method of Use of PhyTer:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

Renogrit रीनोग्रिट

Introduction to Kidney Diseases:

Kidney disease arises from many heterogeneous disease pathways that alter the function and structure of the kidney irreversibly, over months or years. The diagnosis of chronic kidney disease rests on establishing a chronic reduction in kidney function and structural kidney damage. The best available indicator of overall kidney function is the Glomerular Filtration Rate (GFR), which equals the total amount of fluid filtered through all of the functioning nephrons per unit of time. The definition and classification of chronic kidney disease have evolved over time, but current international guidelines define chronic kidney disease as decreased kidney function shown by glomerular filtration rate of less than 60 mL/min per 1.73m2, or markers of kidney damage, or both, of at least 3 months duration, regardless of the underlying cause.

When the glomerular filtration rate is less than 15 mL/min per 1.73m2, a person has reached End-Stage Kidney Disease (ESKD), at which point kidney function is no longer able to sustain life over the long term. Options for patients with end-stage kidney disease are kidney replacement therapy (in the form of dialysis or kidney transplantation), or conservative care (also called palliation or non-dialytic care). The 2002 guidelines for the definition and classification of this disease represented an important shift towards its recognition as a worldwide public health problem that should be managed in its early stages by general internists. Disease and management are classified according to stages of disease severity, which are assessed by Glomerular Filtration Rate (GFR) and albuminuria, and clinical diagnosis (cause and pathology). Chronic kidney disease can be detected with routine laboratory tests, and some treatments can prevent the development and slow disease progression, reduce complications of decreased glomerular filtration rate and risk of cardiovascular disease, and improve survival and quality of life. In developed countries, chronic kidney disease is generally associated with old age, diabetes, hypertension, obesity, and cardiovascular disease, with diabetic glomerulosclerosis and hypertensive nephrosclerosis as the presumed pathological entities; however, exact diagnosis is often difficult.

Diabetic glomerulosclerosis is characterized by slowly worsening albuminuria, hypertension, and progressive decline in glomerular filtration rate, sometimes with nephrotic syndrome. Many countries have surveillance programs to monitor kidney failure treated by dialysis and transplantation. Incidence and prevalence vary because of differences in underlying diseases rates and availability of government-sponsored treatment. Incidence is now as high as 200

cases per million per year in many countries. It is nearing 400 cases per million in the USA, Taiwan, and some regions in Mexico, and has risen fastest in older individuals. Panel 2 provides a five-step guide to the detection and assessment of chronic kidney disease, which can be accomplished by routine laboratory tests. Although glomerular filtration rate is difficult to measure, it can be estimated from serum creatinine. Creatinine assays are now traceable to reference methods, and estimated Glomerular Filtration Rate (eGFR) is now routinely reported in more than 75% of clinical laboratories in the USA.

Treatments for chronic kidney disease can prevent development, slow progression, reduce complications of decreased glomerular filtration rate, reduce risk of cardiovascular disease, and improve survival and quality of life. Data from the US renal data system show a decreasing incidence of kidney failure in some high-risk groups—eg, in young people with diabetes—suggesting beneficial effects of these interventions.

Despite these remarkable advances, the detection, assessment, and management of chronic disease. Ageing and vascular disease are associated with low glomerular filtration rate and high albuminuria, and whether the present definition leads to overdiagnosis of chronic kidney disease has been questioned, particularly for older individuals. The magnitude and cause of these associations are not well understood and are important topics for research, however some evidence suggests that low glomerular filtration rate and high albuminuria are not normal and that the term kidney disease is appropriate.

Ingredients and Medicinal Uses of Renogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Apamarg (Rt.)	*Achyranthes aspera*	Vrikk Shoth Ashmari	• Alleviate inflammation in kidneys • Alleviates calculi	71.5 mg
Pashanbhed (Rt.)	*Saxifraga ligulata*	Ashmari, Vrikk Shool	• Alleviates calculi • Relieves of pain due to renal problems	71.5 mg
Palash (Fl.)	*Butea frondosa*	Mutravrodh	• Alleviates urinary obstruction	71.5 mg
Varun (Bk.)	*Crataeva urvala*	Ashmari, Mutrajanak	• Alleviates calculi • Alleviates UTI	71.5 mg
Punarnavamool (Rt.)	*Boerhavia diffusa*	Vrikk Shoth Har	• Alleviate inflammation in kidneys	71.5 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Kasni (Wl. Pt.)	*Cichorium intybus*	Mutra krichra Har	• Alleviates UTI	53 mg
Kasni (Sd.)	*Cichorium intybus*	Mutra krichra Har	• Alleviates UTI	18 mg
Gokhru (Fr.)	*Tribulus terrestris*	Ashmari, Vrikk Vikar Har	• Alleviates calculi • Alleviate renal disorders	71.5 mg

Renogrit is Useful in:

- **Renal Disorders**
- **Chronic Kidney Disease**
- **Diabetic Nephropathy**

Renogrit: Description in Classical Texts:

Various herbs that are traditionally practiced in Ayurveda for the treatment of renal and urinary disorders are made use of to prepare Renogrit tablet. Bhavaprakasha has included apamarga under Guduchyadi varga. The drug has pungent and bitter tastes with the quality of sharpness and hot potency with katu vipaka. It helps reduce pain and can pacify kapha.
Kasani is bitter in taste with qualities of lightness and dryness; having hot potency and katu vipak. This drug is pacifying kapha and pitta doshas.
Pashanbhed is astringent and bitter in taste. It has light and unctuous qualities. the potency is cold and it has katu vipaka. This drug pacifies all three doshas. It breaks away kidney stones.
Palash is mentioned under Vatadi varga in Bhava prakasha. It promotes digestive power. It is astringent, pungent and bitter in taste with hot potency and katu vipaka.

Varun is mentioned under Vatadi varga in Bhava prakasha. It has astringent, sweet, bitter and pungent tastes. It has dry and light properties. It has katu vipaka and is hot in potency. It pacifies kapha and vata doshas. It can cure urinary tract infections and nephrolithiasis.

Punarnava is mentioned under Guduchyadi varga in Bhava prakasha. It has sweet, bitter and astringent in taste. It pocess the qualities of lightness and dryness. It's vipaka is katu and this drug is hot in potency. It pacifies kapha

and vata doshas. It has anti-inflammatory and increases digestive power.

Bhavaprakasha has included Gokshura/Gokhru drug under Guduchyadi varga. It has sweet taste. It is cold in potency and having madhura vipaka. It is promoting strength, clears the bladder and anti-nephrolithiasis in activity.

Scientific Evidence of Renogrit:

Renogrit was tested at the facilities of Patanjali Research Foundation against antibiotic-induced nephrotoxicity. Use of antibiotics has risen subsequently and so are the incidences of their adverse effects. One such antibiotic is Vancomycin which is widely used against methicillin-resistant bacterial infections. However, Vancomycin accumulation causes nephrotoxicity which leads to an impairment in the filtration mechanisms of kidney. Traditional herbal medicines hold potential for treatment of drug-induced nephrotoxicity. Scientists of Patanjali Research Foundation Trust have investigated protective properties of plant-based medicine Renogrit against Vancomycin-induced kidney injury. Phytometabolite analysis of Renogrit was performed by Ultra-High-Performance Liquid Chromatography. 3-D cell structures (spheroids) formed from human proximal tubular cell (HK-2) were used for in vitro evaluation of Renogrit against Vancomycin-induced alterations in cell viability, P-gp functionality, NAG, KIM-1 levels, and mRNA expression of NGAL and MMP-7. The in vivo efficacy of Renogrit against Vancomycin-induced nephrotoxicity was further evaluated in Sprague Dawley (SD) rats by measurement of Blood Urea Nitrogen, serum creatinine, and their respective clearances. Moreover, estimated Glomerular Filtration Rate, kidney-to-body weight ratio, GSH/GSSG ratio, KIM-1, NAG levels and mRNA expression of KIM-1 and osteopontin were also analyzed. Changes in histopathology of kidney and hematological parameters were also observed. Renogrit treatment led to an increase in cell viability, normalization of P-gp functionality, decrease in levels of NAG, KIM-1, and reduction in mRNA expression of NGAL and MMP-7. In Vancomycin-challenged SD rats, Renogrit treatment normalized altered kidney functions, histological, and hematological parameters. These findings revealed that Renogrit holds a clinico-therapeutic potential for alleviating Vancomycin-associated nephrotoxicity.

Phytochemical investigation was performed using reverse phase chromatographic techniques. Reference standards of gallic aicd, bergenin, methyl gallate, quercetin and boeravinone B are used to confirm the presence of these compounds in Renogrit tablet. The High Performance Liquid Chromatography (HPLC) at 270 nm wavelength, as shown in Fig. 1, confirms the presence of these compounds as the retention time of sample matches with that of Renogrit tablet.

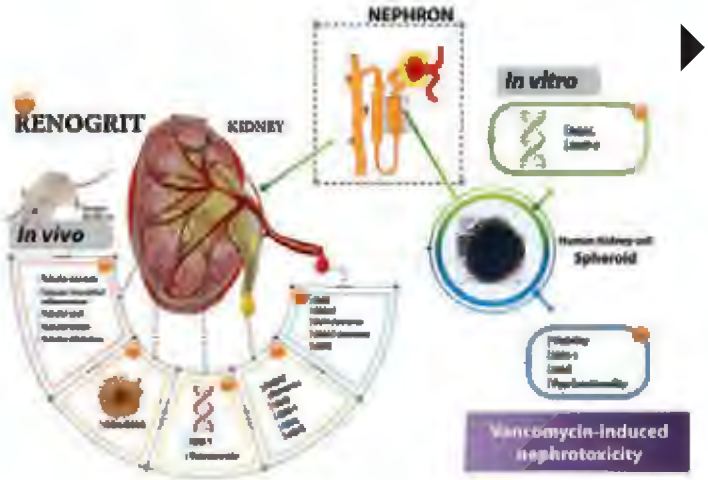


Fig. 1: Reverse Phase High Performance liquid chromatography with Photo Dioade Array Detector (RP-HPLC-PDA) shows the presence of gallic aicd, bergenin, methyl gallate, quercetin and boeravinone B at 270 nm wavelength. Blue chromatogram represents reference standard and orange Renogrit tablet.

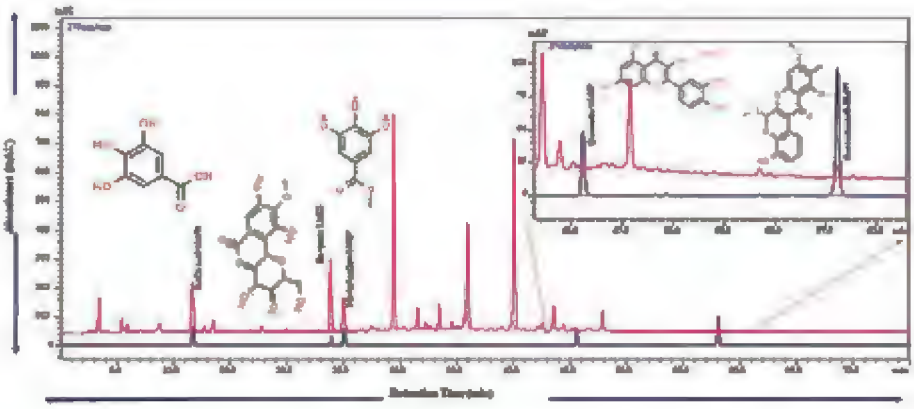


Fig. 2: Reverse Phase High Performance liquid chromatography with Photo Dioade Array Detector (RP-HPLC-PDA) shows the presence of gallic aicd, bergenin, methyl gallate, quercetin and boeravinone B at 270 nm wavelength. Blue chromatogram represents reference standard and orange Renogrit tablet.

Dose and Method of Use of Renogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

Tablet

RENOGRIT VITAL रीनोग्रिट वाइटल

Introduction to Kidney diseases:

Patients with Chronic Kidney Disease (CKD) are at risk of malnutrition and suboptimal vitamin status. Vitamin insufficiency may develop in several independent mechanisms, including inadequate dietary intake, impaired intestinal absorption, altered metabolism, and excessive losses with urine or dialysate.

The supply of vitamins and microelements in patients with Chronic Kidney Disease (CKD) is very important and requires special attention. Chronic Kidney Disease (CKD) patients presented deficiency of these substances in the diet and in organism, but also excess of fat-soluble vitamins or trace elements is observed. Studies indicate that deficiency of vitamins and antioxidants in diet and also enhanced oxidative stress are cause of many complications for example: accelerated process of arteriosclerosis in patients with chronic kidney disease.

Acute Kidney Disease (AKD) which includes Acute Kidney Injury (AKI) and Chronic Kidney Disease (CKD) are highly prevalent among hospitalized patients, including those in nephrology and medicine wards, surgical wards, and Intensive Care Units (ICU), and they have important metabolic and nutritional consequences. Moreover, in case Kidney Replacement Therapy (KRT) is started, whatever is the modality used, the possible impact on nutritional profiles, substrate balance, and nutritional treatment processes cannot be neglected.

The present guideline is aimed at providing evidence-based recommendations for clinical nutrition in hospitalized patients with AKD and CKD. Due to the significant heterogeneity of this patient population as well as the paucity of high-quality evidence data, the present guideline is to be intended as a basic framework of both evidence and - in most cases - expert opinions, aggregated in a structured consensus process, in order to update the two previous European Society for Clinical Nutrition and Metabolism (ESPEN) Guidelines on Enteral (2006) and Parenteral (2009) Nutrition in Adult Renal Failure. Nutritional care for patients with stable CKD (i.e., controlled protein content diets/ low protein diets with or without amino acid/ ketoanalogue integration in outpatients up to CKD stages four and five), nutrition in kidney transplantation, and pediatric kidney disease wasl not addressed in the present guideline.

Ingredients and Medicinal Uses of Renogrit Vital:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Apamarg (Rt.)	*Achyranthes aspera*	VrikkShoth Ashmari	• Alleviate inflammation in kidneys • Alleviates calculi	71.5 mg
Pashanbhed (Rt.)	*Saxifraga ligulata*	Ashmari, Vrikk Shool	• Alleviates calculi • Relieves of pain due to renal problems	71.5 mg
Palash (Fl.)	*Butea frondosa*	Mutravrodh Har	• Alleviates urinary obstruction	71.5 mg
Varun (Bk.)	*Crataeva urvala*	Ashmari, Mutrajanak	• Alleviates calculi • Alleviates Urinary Infection	71.5 mg
Punarnavamool (Rt.)	*Boerhavia diffusa*	Vrikk Shoth Har	• Alleviate inflammation in kidneys	71.5 mg
Kasni (Wl. Pt.)	*Cichorium intybus*	Mutra krichra Har	• Alleviates Urinary Infection	53 mg
Kasni (Sd.)	*Cichorium intybus*	Mutra krichra Har	• Alleviates Urinary Infection	18 mg
Gokhru (Ft.)	*Tribulus terrestris*	Ashmari, Vrikk Vikar	• Alleviates calculi • Alleviate renal disorders	71.5 mg
Fine Powder of:				
Sunflower (Sd.) (Enriched Vitamin B1 and Vitamin B3)	*Helianthus annuus*	Balya	• Strengthening	5.5 mg

Renogrit Vital is Useful in:

- **Renal Disorders**
- **Chronic Kidney Diseases**
- **Diabetic Nephropathy**

Renogrit Vital: Description in Classical Texts:

Various herbs that are traditionally practiced in Ayurveda for the treatment of renal disorders are made use of to prepare this formulation. Bhavaprakasha has included apamarga under Guduchyadi varga. The drug has pungent and bitter tastes with the quality of sharpness and hot potency with katu vipaka. It helps reduce pain and pacify kapha.

Kasani is bitter in taste with qualities of lightness and dryness; having hot potency and katu vipak. This drug is pacifying kapha and pitta doshas. Pashanbhed is astringent and bitter in taste. It has light and unctuous qualities. the potency is cold and it has katu vipaka. This drug pacifies all three doshas. It breaks away kidney stones. Palash is mentioned under Vatadi varga in Bhava prakasha. It promotes digestive power. It is astringent, pungent and bitter in taste with hot potency and katu vipaka.

Varun is mentioned under Vatadi varga in Bhava prakasha. It has astringent, sweet, bitter and pungent tastes. It has dry and light properties. It has katu vipaka and is hot in potency. It pacifies kapha and vata doshas. It can cure urinary tract infections and nephrolithiasis.

Punarnava is mentioned under Guduchyadi varga in Bhava prakasha. It has sweet, bitter and astringent in taste. It pocess the qualities of lightness and dryness. It's vipaka is katu and this drug is hot in potency. It pacifies kapha and vata doshas. It has anti-inflammatory and increases digestive power.

Bhavaprakasha has included Gokshura/Gokhru drug under Guduchyadi varga. It has sweet taste. It is cold in potency and having Madhura vipaka. It is promoting strength, clears the bladder and anti-nephrolithiasis in activity.

Sunflower primary purpose is to calm kapha and vata. A substance found throughout the whole plant that has anti-cancer potential is alcohol. It eases body absorption, aids in digestion, and relieves pain. It is an anti-helminthic. Dermatoses and vata problems are cured by it.

Scientific Evidence of Renogrit Vital:

Renogrit Vital tablet was characterised by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector with the help of two different methods. During the first method analysis, the several compounds were obtained at 270 nm wavelength generally gallic acid at 11.386 minutes, bergenin at 24.089 minutes, methyl gallate at 24.560 minutes, butein at 49.226 and boeravinone B (58.060 minutes). In the chromatograms, the dark blue line shows standards and pink line indicates the test sample, as shown in Fig. 1. In the second method of analysis, the vitamin B3 (4.654 minutes) was obtained as the main product in the Renogrit Vital tablet at 262 nm wavelength. In the chromatograms, the dark blue shows the standard and pink line indicates the test sample, as shown in Fig. 2.

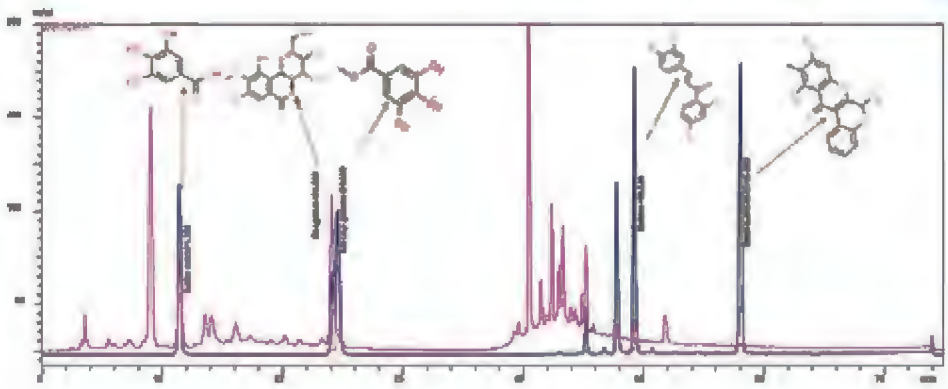


Fig. 1. Analysis of the Renogrit Vital tablet by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Renogrit Vital tablet, the compounds were found at 270 nm wavelength mainly gallic acid (11.386 minutes), bergenin (24.089 minutes), methyl gallate (24.560 minutes), butein (49.226) and boeravinone B (58.060 minutes). In the chromatograms, the dark blue line shows standards and pink line indicates the test sample.

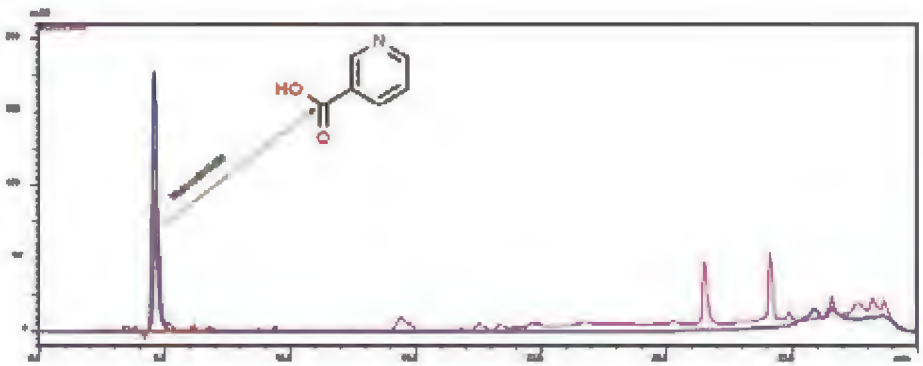


Fig. 2. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Renogrit Vital tablet. In Renogrit Vital tablet, the compound was found mainly vitamin B3 (4.654 minutes) at 262 nm wavelength. In the chromatograms, the dark blue shows the standard and pink line indicates the test sample.

Dose and Method of Use of Renogrit Vital:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

Lithom लिथोम

Introduction to Kidney Disorders:

Kidneys are two bean-shaped organs, each being around the size of a fist. The kidneys produce urine by filtering excess water and wastes from blood. Kidney disease indicates that kidneys have been damaged and are unable to filter blood as effectively as they should.

The majority of kidney illnesses affect the nephrons. This injury may render the kidneys incapable of removing wastes. Genetic issues, trauma, and medications are all possible causes. If one has diabetes, high blood pressure, or a close family member with kidney disease, you are at an increased risk of developing kidney disease. Chronic kidney disease gradually deteriorates the nephrons over time. Other common renal issues are as follows: Nephrolithiasis, Urine retention and Dysuria

Nephrolithiasis is the medical word for kidney stones, also known as renal calculi, which are crystal concretions that occur in the kidney. Calculi normally originate in the kidneys and should exit the body painlessly through the urethra. Larger stones can cause pain and may necessitate surgery.

Physicochemical alterations and urine supersaturation are involved in the development of renal stones. Solutes precipitate in urine under supersaturation conditions, resulting in nucleation and crystal concretions. The transition of a liquid to a solid is influenced by PH and particular concentrations of surplus chemicals. Supersaturation of stone-forming elements such as calcium, phosphorus, uric acid, oxalate, cystine, and inadequate urine volume are risk factors for crystallisation in nephrolithiasis. Nephrolithiasis can be avoided by avoiding supersaturation.

Urinary retention is a disorder in which one is unable to empty the bladder completely. Urinary retention is a disorder that may be associated with other health issues, such as prostate difficulties in males or a cystocele in women. Urinary retention can be acute (inability to pass urine at all) or chronic (inability to empty the bladder gradually). When a person is suddenly unable to urinate, acute urine retention can even be fatal. Chronic urine retention may go undetected since it is usually asymptomatic.

Dysuria is a symptom of urination that causes discomfort, burning, stinging, or itching in the urethra or urethral meatus. It is a relatively common urinary symptom that most individuals may encounter at least once in their lives. Dysuria causes are roughly classified into two types: infectious and non-infectious. Treatment varies according to the cause.

Ingredients and Medicinal Uses of Lithom:

Ingredient/ Extracts of	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Gokhru (Fr.)	*Tribulus terrestris*	Mutral, Shoth Har, Ashmari Har	• Diuretic • Anti-inflammatory • Cures calculi	50 mg
Kulath Dal (Sd.)	*Dolichos biflorus*	Ashmari Bhedak	• Breaks calculi	50 mg
Varun (Bk.)	*Crateva nurvula*	Mutrashmari Har, Mutr Krichra Har	• Cures calculi • Cures urinary infection	50 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Shoth Har, Mutral. Ashmari Har	• Anti-inflammatory • Diuretic • Cures calculi	20 mg
Pashanbhed (Rt.)	*Saxifraga ligulata*	Mutrashmari Har, Mutr Krichra Har	• Cures calculi • Cures urinary infection	20 mg
Methi (Sd.)	*Trigonella foenum-graecum*	Shoth Har, Dah Shamak	• Anti-inflammatory • Cures burning sensation	10 mg
Fine Powder of:				
Yava Kshara	Classical Product	Anaha, Shoola Har, Mutra Krchra Har,	• Cures abdominal pain and distention • Cures urinary infection	100 mg
Hazrul Yahud Bhasma	Classical Product	Mutra Dah Shamak, Ashmari Har	• Cures burning micturition • Cures calculi	50 mg
Kalmi Shora	Classical Product	Mutravirechak, Sothhar, Mutra Krichra Har	• Diuretic • Anti-inflammatory • Cures urinary infection	20 mg
Mulaka Kshara	Classical Product	Mutr Krichra Har, Mutrashmari Har,	• Cures urinary infection • Cures calculi	80 mg
Sweta Parpati	Classical Product	Mutravirechak, Mutr Krichra Har, Mutrashmari Har	• Diuretic • Cures urinary infection • Cures calculi	50 mg

Lithom is Useful in:

- **Renal Alculus**
- **Dysuria**
- **Urine Retention**
- **Burning Micturition**
- **Renal Problems**

Lithom: Description in Classical Texts:

Bhavaprakasha has included Gokshura/Gokhru drug under Guduchyadi varga. It has sweet taste. It is cold in potency and having madhura vipaka. It is promoting strength, clears the bladder and anti-nephrolithiasis in activity.

Kulath, mentioned under the Dhanya varga by Bhava prakasha, has astringent taste and properties of lightness and causing burning sensation. It is hot in potency. It pacifies kapha and vata doshas. It can cure renal stones.

Varun is mentioned under Vatadi varga in Bhava prakasha. It has astringent, sweet, bitter and pungent tastes. It has dry and light properties. It has katu vipaka and is hot in potency. It pacifies kapha and vata doshas. It can cure urinary infection and nephrolithiasis.

Punarnava is mentioned under Guduchyadi varga in Bhava prakasha. It has sweet, bitter and astringent in taste. It pocess the qualities of lightness and dryness. It's vipaka is katu and this drug is hot in potency. It pacifies kapha and vata doshas. It has anti-inflammatory and increases digestive power.

Pashanbhed is astringent and bitter in taste. It has light and unctuous qualities. the potency is cold and it has katu vipaka. This drug pacifies all three doshas. It breaks away kidney stones.

Methi has pungent and bitter tastes and has katu vipaka. It has hot potency and pocess the qualities of lightness and unctuousness. It pacifies kapha and vata doshas.

Yava kshara is having the qualities of lightness, unctuousness and subtleness. It can cure pain and promotes digestion.

Hazrul yahud bhasma pacifies pitta and kapha doshas. It can cure urinary calculi and other diseases of the urinary system.

Kalmi shora has pungent and alkaline tastes. It has hot potency and is light and penetrating qualities. It improves the digestion. It pacifies vata and kapha doshas.

Mulaka kshara prepared from moolaka/ Raphenus sativus. It is also having alkaline taste. It is sharp and burning in nature. It has

hot potency but coolant externally. It cures urinary calculi.

Swet parpati, made from navasara, suryakshara and sphatika, this classical preparation is most widely used in treating urinary calculi. It balances vata and pitta doshas.

Scientific Evidence of Lithom:

Lithom tablet has been studied in detail for its anti-nephrolithiac activity by experts from Patanjali Research Foundation. It was looked at for its activity against the most commonly observerved stones in clinical setting: Calcium Oxalate Monohydrate(COM).

In the in vitro experiments, presence of Lithom reduced the size of Calcium Oxalate Monohydrate crystals in a dose-dependant manner. Further Scanning Electron Microscope (SEM) analysis showed that at adequate doses, Lithom showed significant morphological changes from irregular sharp edged polygonal crystals to smooth surfaced cuboid polygonal crystals with a smooth surface as shown in Fig. 1.

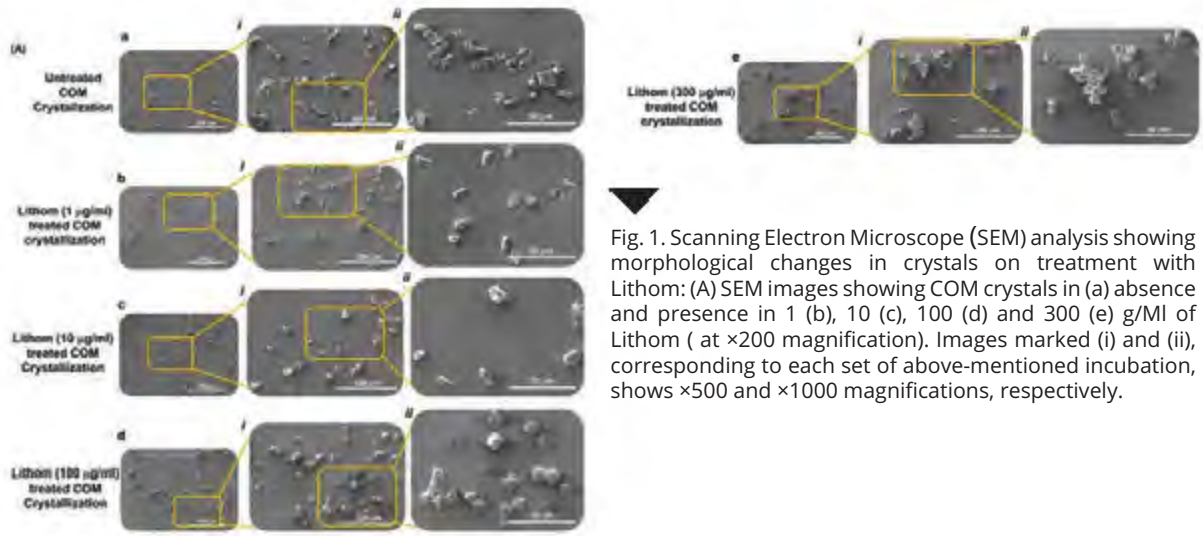


Fig. 1. Scanning Electron Microscope (SEM) analysis showing morphological changes in crystals on treatment with Lithom: (A) SEM images showing COM crystals in (a) absence and presence in 1 (b), 10 (c), 100 (d) and 300 (e) g/Ml of Lithom (at ×200 magnification). Images marked (i) and (ii), corresponding to each set of above-mentioned incubation, shows ×500 and ×1000 magnifications, respectively.

To identify the phytometabolites present in Lithom, which are responsible for its beneficial effects, Ultra High Performance Liquid Chromatography (UHPLC) analysis was carried out. The peaks in the UHPLC chromatogram of Lithom were identified and quantified by comparing sample with that standard compounds. Analysis confirm the presence of

trigonelline, adenosine, xanthosine, bergenin, vanillic acid, ellagic acid, boeravinone B as shown in Fig 2.

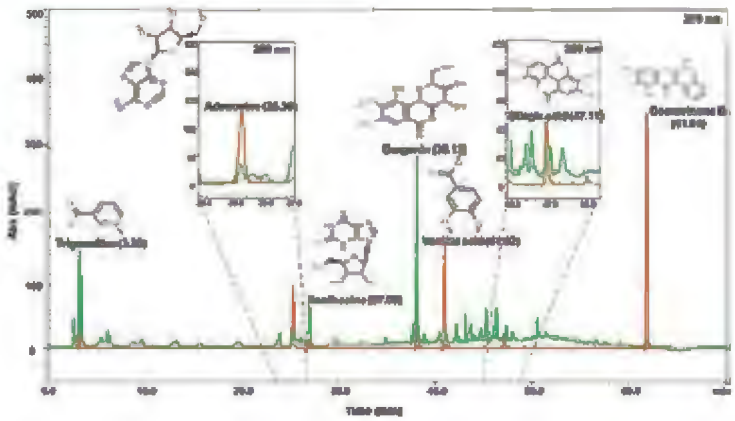


Fig. 2. Quantitative analysis of phytoconstituents of Lithom using Ultra High Performance Liquid Chromatography (UHPLC).
Seven metabolites were detected at different retention time (RT: min) trigonelline (RT: 3.28 min), adenosine (RT: 25.36 min), xanthosine (RT: 27.03 min), bergenin (RT: 38.12 min), vanillic acid (RT: 41.02 min), ellagic acid (RT: 47.11 min), and boeravinone B (RT: 61.84 min).

In vivo studies also showed promising results in EG induced crystalluria in rats. After administering EG to the rats for 28 days, crystals of Calcium Oxalate Monohydrate were identified in urine. Lithom at 43 and 129 mg/kg given orally showed significant inhibition in a dose related manner as shown in Fig. 3.

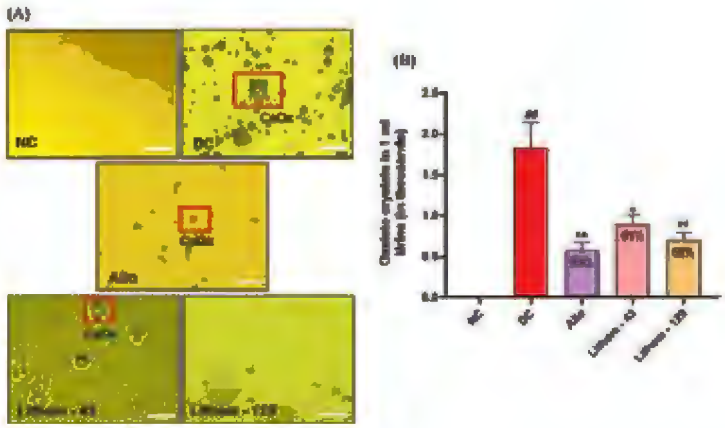


Fig. 3. Crystalluria evaluation by microscopic method. (A) Urine microscopic images from ethylene glycol treated SD Rats with treatments
(B) quantitative analysis of COM crystals per mL urine. NC : Normal control group, DC: Disease control (0.75% ethylene glycol + 1% NH4Cl), Allo: allopurinol 50 mg/kg, Lithom- 43: Lithom 43 mg/kg and Lithom -129: Lithom 129 mg/kg.

Lithom oral administration at 43 and 129 mg/kg doses also showed lower oxalate levels and a trend to restore the urinary citrate levels in urine. It also restored catalase activity, thus ameliorationg Calcium Oxalate Monohydrate induced oxidative stress. Malondialdehyde, another oxidative stress inducing agent, was restored to nearly normal by Lithom. Further, histopathological studies gave evidence to Lithom reducing crystal deposition as

well as reduced associated renal injury and inflammation as shown in Fig. 4.

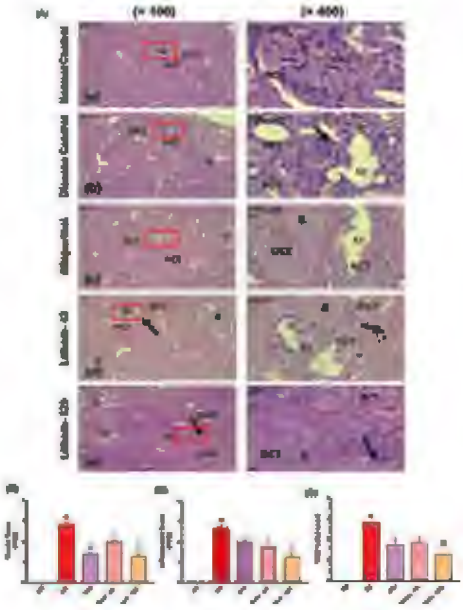


Fig. 4. Histopathological examination of kidney through H & E staining. (A) Normal control: No crystals(a), Disease control with high number crystals(b), Allopurinol at 50 mg/kg (c), Lithom at 43 mg/kg (d), and Lithom at 129 mg/kg(e) showing a dose dependent effect in prevention of crystal retention (B) Crystal score. (C) Inflammation score. (D) Total lesion score.

Van Kossa staining showed that Lithom treatment significantly reduced crystal formation in a dose related manner. Fig. 5.

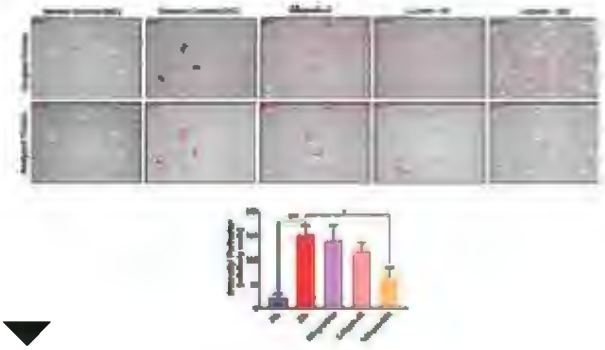


Fig. 5. Histopathological examination of kidney through Von Kossa staining. Von kossa stained crystals appeared black and their analysis using Fiji appeared red in × 100 magnification. Quantitative analysis of the intensity/ perimeter ratio of the von kossa stained crystal is representing a decreasing trend with increasing dose of Lithom.

The study detailed cellular and animal model experiments of anti-nephrolithiasis activity by Lithom and concludes that Lithom could be a potential therapeutic choice for the treatment of Calcium Oxalate Monohydrate renal stones.

Dose and Method of Use of Lithom:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

UTInil यूटीआईनिल

Introduction to Urinary Tract Infections:

Urinary Tract Infections (UTI) are a severe public health problem and are caused by a range of pathogens, but most commonly by *Escherichia coli, Klebsiella pneumoniae, Proteus mirabilis, Enterococcus faecalis* and *Staphylococcus saprophyticus.* High recurrence rates and increasing antimicrobial resistance among uropathogens threaten to greatly increase the economic burden of these infections. Here, we discuss how basic science studies are elucidating the molecular details of the crosstalk that occurs at the host–pathogen interface, as well as the consequences of these interactions for the pathophysiology of urinary tract infections. We also describe current efforts to translate this knowledge into new clinical treatments for Urinary Tract Infections (UTI).

Urinary tract infections are a significant cause of morbidity in infant boys, older men and females of all ages. Serious sequelae include frequent recurrences, pyelonephritis with sepsis, renal damage in young children, pre-term birth and complications caused by frequent antimicrobial use, such as high-level antibiotic resistance and *Clostridium difficile colitis*.

Urinary tract infections are among the most common bacterial infections acquired in the community and in hospitals. In individuals without anatomical or functional abnormalities, Urinary tract infections are generally self limiting, but have a propensity to recur. Uropathogens have specialized characteristics, such as the production of adhesins, siderophores and toxins that enable them to colonize and invade the urinary tract, and are transmitted between individuals both through person-to-person contact and possibly via food or water. Although generally self limiting, treatment of urinary tract Infections with antibiotics leads to a more rapid resolution of symptoms and is more likely to clear bacteriuria, but also selects for resistant uropathogens and commensal bacteria and adversely affects the gut and vaginal microbiota. As uropathogens are increasingly becoming resistant to currently available antibiotics, it may be time to explore alternative strategies for managing Urinary tract Infections.

Clinically, urinary tract infections are categorized as uncomplicated or complicated. Uncomplicated Urinary tract infections typically affect individuals who are otherwise healthy and have no structural or neurological urinary tract abnormalities, these infections are differentiated into lower Urinary tract infections (cystitis) and upper Urinary tract infections (pyelonephritis). Several risk factors are associated with cystitis, including female gender, a prior Urinary tract Infections, sexual activity, vaginal infection, diabetes, obesity and genetic susceptibility. Complicated urinary tract

Infections are defined as Urinary tract infections associated with factors that compromise the urinary tract or host defence, including urinary obstruction, urinary retention caused by neurological disease, immunosuppression, renal failure, renal transplantation, pregnancy and the presence of foreign bodies such as calculi, indwelling catheters or other drainage devices. In the United States, 70–80% of complicated Urinary tract Infections are attributable to indwelling catheters, accounting for 1 million cases per year. Catheter-Associated Urinary Tract Infections (CAUTI) are associated with increased morbidity and mortality, and are collectively the most common cause of secondary bloodstream infections. Risk factors for developing a CAUTI include prolonged catheterization, female gender, older age and diabetes.

Urinary tract Infections are caused by both Gram-negative and Gram-positive bacteria, as well as by certain fungi. The most common causative agent for both uncomplicated and complicated Urinary tract infections is Uro-Pathogenic *Escherichia coli* (UPEC). For the agents involved in uncomplicated Urinary tract infections, UPEC is followed in prevalence by *Klebsiella pneumoniae, Staphylococcus saprophyticus, Enterococcus faecalis, group B Streptococcus, Proteus mirabilis, Pseudomonas aeruginosa, Staphylococcus aureus* and *Candida spp*. For complicated urinary tract infections, the order of prevalence for causative agents, following UPEC as most common, is *Enterococcus spp., K. pneumoniae, Candida spp., S. aureus, P. mirabilis, P. aeruginosa* and *group B Streptococcus.*

Ingredients and Medicinal Uses of UTInil:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Karonda (Fr.)	*Carissa carandas*	Mutrajanak, Mutarog Har	• Diuretic • Alleviates urinary tract infection	245 mg

UTInil is Useful in:

- **Recurrent Urinary Tract Infections**

UTInil: Description in Classical Texts:

UTInil is an Ayurvedic Proprietary medicine whose main ingredient is Karonda, which has hot potency, is heavy and dry in property. It aggravates kapha dosha. Acts as a thirst depressant and appetizer. It cures epistaxis and urinary diseases.

Scientific Evidence of UTInil:

UTInil tablet was characterized by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA). During the analysis of UTInil tablet, the different compounds were obtained at 270 nm wavelength, 5-hydroxyl methyl furfural (5-HMF) at 10.14 minutes, protocatechuic acid at 13.79 minutes; at 325 nm, wavelength chlorogenic acid at 22.79 minutes, as shown in Fig. 1. In the chromatograms, the blue line indicates the standard and pink line represents the test sample.

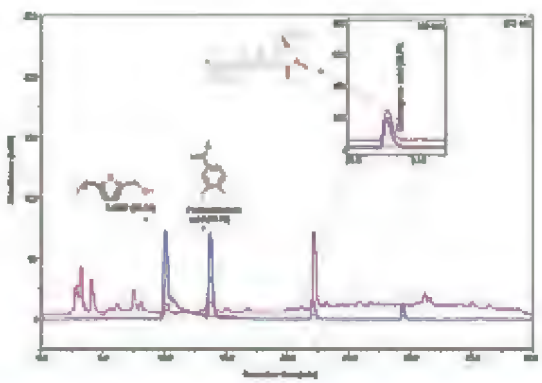


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the UTInil tablet. In UTInil tablet, the different compounds were obtained at 270 nm wavelength: 5-hydroxyl methyl furfural (5-HMF) (10.14 minutes), protocatechuic acid (13.79 minutes); at 325 nm, wavelength chlorogenic acid (22.79 minutes). In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of UTInil:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

TRIGHAN ट्रायघन

Introduction to Inflammation:

Inflammation is a comprehensive array of physiological response to a foreign organism, including human pathogens, dust particles, and viruses. Inflammations are mainly divided into acute and chronic inflammation depending on various inflammatory processes and cellular mechanisms. Recent investigations have clarified that inflammation is a major factor for the progression of various chronic diseases/disorders, including diabetes, cancer, cardiovascular diseases, eye disorders, arthritis, obesity, autoimmune diseases, and inflammatory bowel disease. Free radical productions from different biological and environmental sources are due to an imbalance of natural antioxidants which further leads to various inflammatory associated diseases.

The systematic knowledge regarding the role of inflammation and its associated adverse effects can provide a clear understanding in the development of innovative therapeutic targets from natural sources that are intended for suppression of various chronic inflammations associated diseases. Inflammation has become one of the most serious and interesting investigation research areas among biomedical researchers. The microcirculation is the main playground where the process of inflammatory cascade was evaluated and analyzed. Inflammation includes a long chain of molecular reactions and cellular activity, which are designed to restore a tissue from simple skin cut or to repair tissue after giving birth or to cure several burn injuries. An inflammatory process in cellular and tissue levels includes a series of occasions with dilation of venules and arterioles, enhanced blood vessel permeability, and blood flow with percolation of leukocytes into the tissues. Moreover, a dysfunction of tissue via proteolytic activity and regeneration of new humoral production for cell growth and reformation of novel functional and connective tissue are observed through a typical inflammatory response.

An inflammation cascade, which does not reach to resolution state, contributes to organ disorder and death. The inflammatory cascade is preprogrammed and stereotyped, and it is the only identified mechanism for restoration of tissue after injury. In the recent years, inflammation is one of the major target research areas among biomedical researchers, which includes various cellular processes (e.g., phagocytosis, chemotaxis, mitosis, and cell differentiation. There are several studies described on how the immune system (cellular immunity and antibodies) leads to an inflammatory response, and there is an additional huge clinical literature about individual steps in inflammation. Frailty is an important clinical syndrome of age-related decline in physiologic reserve and

increased vulnerability. In older adults, frailty leads to progressive multisystem decline and increased adverse clinical outcomes. The pathophysiology of frailty is hypothesized to be driven by dysregulation of neuroendocrine, inflammatory, and metabolic pathways. Sex-specific differences in the prevalence of frailty have been observed. Treatment interventions of geriatric care can be applied to the care of frail older women with these differences in mind.

Ingredient and Medicinal Uses of Trighan:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Gokhru (Fr.)	*Tribulus terrestris*	Ashmari Har, Vednasthapak, Shoth Har, Dhatuvardhak	• Reduces pain • Helpful in calculi • Anti Inflammatory • Nourishing	460 mg

Trighan is Useful in:

- **Inflammation**
- **Urinary Tract Infection**
- **Weakness**

Trighan: Description in Classical Texts:

Gokhru is sweet in taste and has cold potency. It has light and dry properties, pacifies vata dosha. Acts as a tonic, appetizer and aphrodisiac; and cures calculi, polyuria, asthma, cough, hemorrhoids, dysuria and heart ailments.

Scientific Evidence of Trighan:

Phytochemical evaluation of Trighan tablet was conducted using High Performance Liquid Chromatography (HPLC) at 270 nm wavelength. The study demonstrated that tablet contains gallic acid and rutin as major phytochemicals. Fig. 1 shows an overlay chromatogram of

reference standard (blue colour) and Trighan tablet (orange colour) confirming the presence of gallic acid (retention time 6.67 minutes) and rutin (retention time 27.23 minutes)

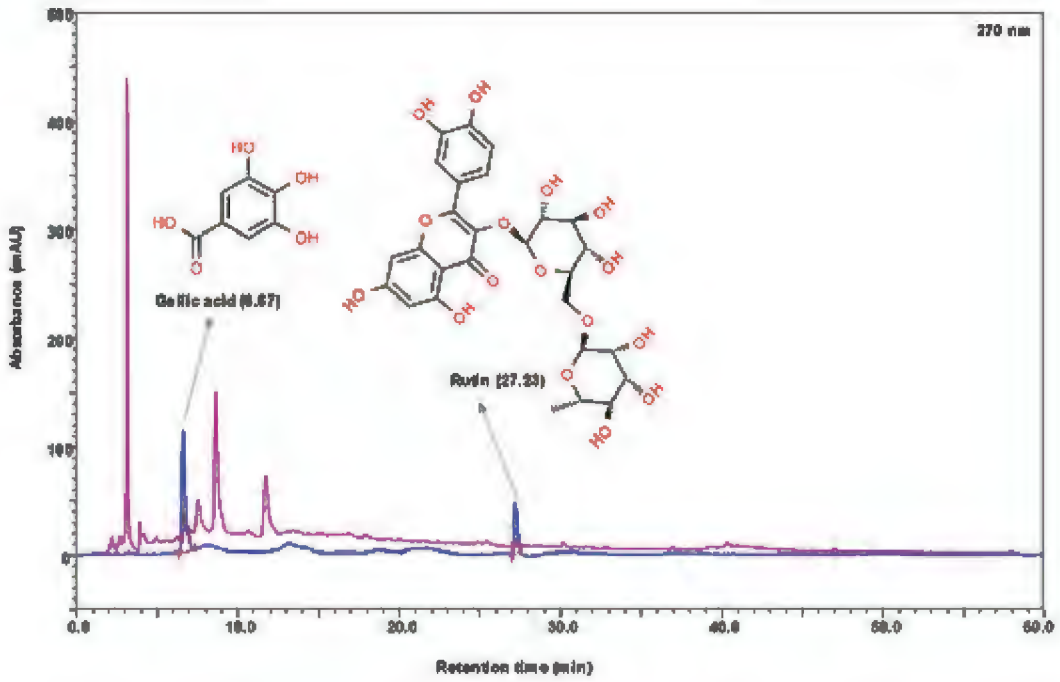


Fig. 1: High Performance Liquid Chromatography (HPLC) chromatogram showing the presence of gallic acid and rutin as major phytoconstituents.

Dose and Method of Use of Trighan:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

PROSTOGRIT प्रोस्टोग्रिट

Introduction to Benign Prostatic Hyperplasia:

Benign Prostatic Hyperplasia (BPH) can be defined as prostate adenoma/adenomata causing Bladder Outlet Obstruction (BOO) that may cause harm to the bladder and eventually the kidneys. This obstruction depends more on the site than size of the adenoma. A small adenoma at the bladder neck forming the middle lobe can cause significant obstruction to the bladder due to distortion of the funneling effect of the normal bladder neck. On the other hand, an adenoma forming the lateral lobes can grow to a considerable size before causing obstruction by compressing the prostatic urethra. In flow dynamics, compression is less obstructive than distortion.

Due to the slow progression of the disease, patients may get used to the symptoms and not have any complaints. They may not have Lower Urinary Tract Symptoms (LUTS) and present instead with sudden acute retention of urine or less commonly be found to have chronic retention with renal failure. Some may present with painless gross haematuria or urinary infection. With the introduction of Prostate-Specific Antigen (PSA) in health screening, many patients may present with raised Prostate-specific antigen.

Therefore, clinical benign prostatic hyperplasia can be defined as prostate adenoma/adenomata causing a varying degree of bladder outlet obstruction, with or without symptoms.

Clinical benign prostatic hyperplasia can nowadays be diagnosed with non-invasive ultrasound by measuring Intravesical Prostatic Protrusion (IPP) in the clinic. The intravesical prostatic protrusion is measured in the sagittal view of a comfortably full bladder (about 200 ml) and it is the distance in mm from the innermost protrusion of the prostate perpendicularly down to the base at the circumference of the bladder. It has a 100% positive predictive value and 100% specificity for diagnosing prostate adenoma. Together with uroflowmetry, prostate adenoma can be ruled out as a cause of lower urinary tract symptoms if there is no intravesical prostatic protrusion and the flow rate is good. This is useful in the differential diagnosis of male lower urinary tract symptoms.

Prostate-Specific Antigen (PSA) is also important in the differential diagnosis. In patients with no clinical benign prostatic hyperplasia, no prostatitis and no prostate cancer, Prostate-specific antigen is generally less than 1 µg/l. This is seen in patients after transurethral enucleation of the prostate adenoma/ adenomata). Prostate-specific antigen is related to the size of the adenoma and in early studies investigating normal Prostate-specific antigen

levels, many of the subjects might have prostate adenoma of varying sizes with no lower urinary tract symptoms symptoms, leading to Prostate-specific antigen less than 4 µg/l being accepted as normal and the misconception that Prostate-specific antigen increases with age. In contrast, we have observed in our clinic that if a patient has no clinical benign prostatic hyperplasia (adenoma), no prostatitis and no cancer, the Prostate-specific antigen level remains the same over the years.

Severity of clinical BPH can be staged accordingly:

Stage I: No significant obstruction and no bothersome symptoms.

Stage II: No significant obstruction but has bothersome symptoms.

Stage III: Significant obstruction irrespective of symptoms.

Stage IV: complications of clinical benign prostatic hyperplasia such as retention of urine, recurrent haematuria, urinary tract infection, and bladder stones.

Prostate adenoma/adenomata can be graded according to intravesical prostatic protrusion (grade 1: ≤ 5 mm, grade 2: > 5 mm–10 mm, and grade 3: > 10 mm) and prostate volume (a: ≤ 20 g, b: > 20–40 g, and c: > 40 g). Grade 1a prostates are least obstructive and grade 3a prostates most obstructive, and the disease can be managed accordingly. Grade 3a prostates would generally be better treated surgically, as they are small and easily removed by transurethral resection whereas grade 1c prostates would be more suitable for medical treatment with five-alpha reductase inhibitors.

About 60% of the patients with clinical benign prostatic hyperplasia have low-grade and low-stage disease and they can be watched with advice on fluid adjustment, diet, and exercise while those with higher stage and higher grade disease would need more aggressive medical or surgical treatment options.

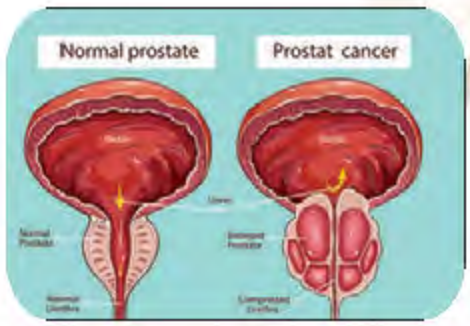
Ingredients and Medicinal Uses of Prostogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Fine Powder of:				
Chandraprabha Vati	Classical Medicine	Mutrakrichchchh Har, Yogvahi	• Alleviates urinary tract infections • Accelerates the properties of other drugs	100 mg
Mandoor Bhasma	Classical Preparation	RaktalptaHar, Shoth Har	• Alleviates bleeding disorders • Anti-inflammatory	30 mg
Lauh Bhasma	Classical Preparation	RaktaVardhak, ShothGulm Har	• Increases blood • Anti-inflammatory • Alleviates tumors in the abdomen	30 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Shuddh Shilajit	*Asphaltum punjabianum*	Yogvahi, Shothaghna, Vridhi Rog Har	• Accelerates the properties of other drugs • Anti-inflammatory • Alleviates Hernia	75 mg
Guggul Shuddh (Gum resin)	*Commiphora wightii*	Shoth-Vednahar, Gulm-Vridhi Har	• Anti-inflammatory • Pain-relieving • Alleviates tumours in abdomen • Alleviates hernia	75 mg
Dry Extract of:				
Tomato (Fr.) (Lycopene 10%)	*Solanum lycopersicum*	Rakt Vardhak, Rochak, Pachak	• Increases blood • Promotes digestion	20 mg
Gokharu (Fr.)	*Tribulus terrestris*	Shoth Har, Mutra Vikar Har	• Anti-inflammatory • Alleviates urinary diseases	150 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Vishaghna Shothaghna, Basti Vikar Har	• Anti-toxic, • Anti-inflammatory • Alleviates diseases of urinary bladder	30 mg

Prostogrit is Useful in:

- **Benign Prostatic Hyperplasia and Associated Lower Urinary Tract Symptoms**
- **Difficulty in Urination**



Prostogrit: Description in Classical Texts:

Prostogrit medicine has a combination of very efficient herbs that are used in Ayurveda. Chandraprabha vati is explained in Bhaishajya Ratnavali under Prameharogaadhikara. This formulation has over thirty ingredients in it. The main ingredient in shilajit and Lauha bhasma. This herbo-mineral formulation gives excellent results in genitourinary diseases.

Mandoor bhasma is prepared by proper incineration of mandoor-Rust of iron. The bhasma preparations are unique to Ayurveda and has the ability to penetrate minute tissues. This helps proper active priciples in drug to reach target of action.

Lauha bhasma is prepared from iron. This preparation has apotent blood purifying action and can help in maintaining health as a whole. This acts as rejuvenating also. Tomato/ raktaphala is light and unctuous in quality. It has sweet and sour tastes with hot potency. It is having katuvipaka.

Shilajit mentioned under Dhatu - upadhatu - rasauparasa - ratna - uparatna - visha - upavishadivarga. It has pungent and bitter tastes. It has katuvipaka and is hot in potency. It can cure UTI, urinary calculi and has anti-inflammatory actions.

Bhavaprakasha has included Gokshura/ Gokhru drug under Guduchyadivarga. It has a sweet taste; cold in potency and having Madhuravipaka. It is promoting strength, clears the bladder and anti-nephrolithiasis in activity. Guggulu has bitter and pungent tastes. It is placed in Karpooradivarga by Bhava prakasha. It pocess the qualities of lightness, dryness and clarifying the channels in body. It is hot in potency and has katuvipaka. It balances all three doshas. It can help cure tumours and is helpful in thyroid disorders.

Punarnava comes under Guduchyadivarga in Bhava prakasha. It has sweet, bitter and astringent in taste. It has the qualities of lightness and dryness. It has katuvipaka and is hot in potency. It pacifies kapha and vata doshas. It has anti-inflammatory and increases digestive power.

Scientific Evidence of Prostogrit:

Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector confirms the presence of different compounds mainly gallic acid, 5-hydroxyl methyl furfural (5-HMF), metgyl gallate, coumarin, cinnamic acid, and piperine at 270 nm wavelength; guggulsterone-E and Z at 240 nm wavelength. In the chromatograms, the blue line represents standards and the pink line represents the test sample.

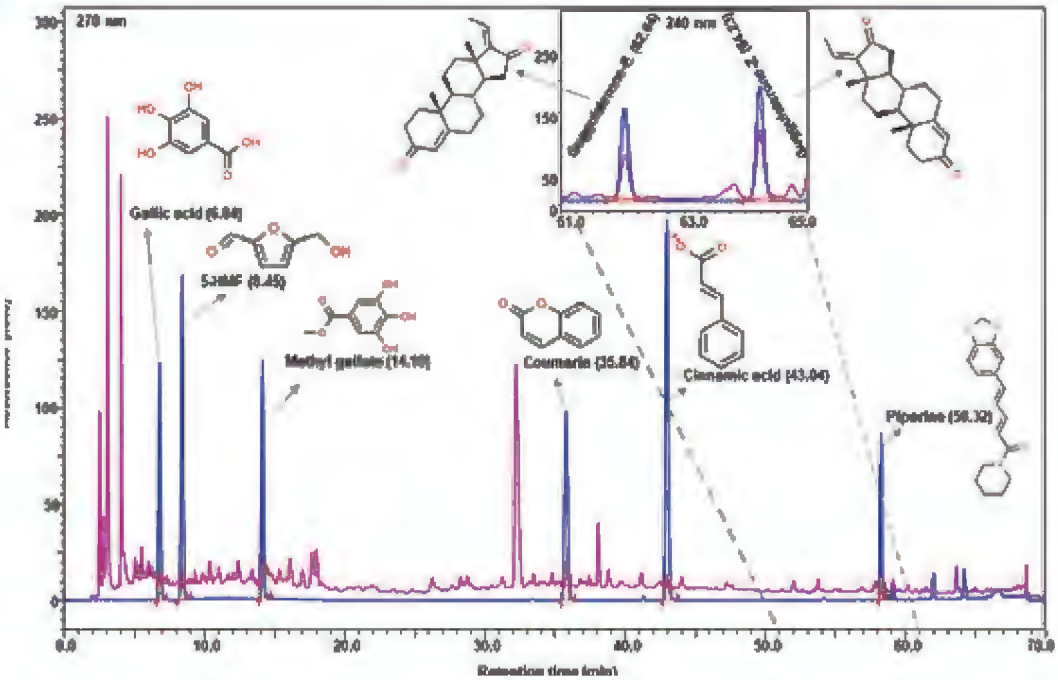


Fig. 1. Analysis of Prostogrit tablet by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Prostogrit tablet, the different compounds were observed mainly gallic acid, 5-hydroxyl methyl furfural (5-HMF), metgyl gallate, coumarin, cinnamic acid, and piperine at 270 nm wavelength; guggulsterone-E and Z at 240 nm wavelength. In the chromatograms, the blue line represents standards and the pink line represents the test sample.

Dose and Method of Use of Prostogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Capsule

YOUVANGRIT GOLD

यौवनग्रिट

Introduction to Infertility:

Infertility is a prevalent condition affecting an estimated 70 million people globally. The World Health Organization (WHO) estimates that 9% of couples worldwide struggle with fertility issues and that male factor contributes to 50% of the issues. Male infertility has a variety of causes, ranging from genetic mutations to lifestyle choices to medical illnesses or medications. Recent studies examining DNA fragmentation, capacitation, and advanced paternal age have shed light on previously unknown topics. The role of conventional male reproductive surgeries aimed at improving or addressing male factor infertility, such as varicocelectomy and testicular sperm extraction, have recently been studied in an attempt to expand their narrow indications. Despite advances in the understanding of male infertility, idiopathic sperm abnormalities still account for about 30% of male infertility. With current and future efforts examining the molecular and genetic factors responsible for spermatogenesis and fertilization, we may be better able to understand etiologies of male factor infertility and thus improve outcomes for our patients.

Infertility is a condition that is well recognized by the WHO. Although worldwide prevalence data are lacking, couple infertility is estimated to affect 72.4 million people globally, according to large population surveys. Additionally, the WHO estimates that 9% of couples worldwide struggle with fertility issues and that the male factor accounts for 50% of couple sub-fertility.

Nonetheless, a variety of medical comorbid conditions have been found to affect semen parameters. To name a few, these include renal disease, liver failure, hemochromatosis, chronic obstructive pulmonary disease, cystic fibrosis, and multiple sclerosis. The mechanism by which medical conditions may impact fertility includes effects on hormonal levels, impairment of sexual function (including ejaculatory function), or impairment of testicular function/ spermatogenesis. By medically optimizing a man's health, improvements in medical disease status can improve semen parameters, sexual function, and fertility potential.

For instance, obesity is associated with male infertility, likely because of hormonal changes secondary to excess adipose tissue, Couples undergoing Assisted Reproductive Technology (ART), in which the male partner is obese, also have decreased pregnancy rates and increased pregnancy loss, possibly due to higher DNA fragmentation rates in obese men.

Male infertility may be an early sign of poor overall health. Not only may infertility be the presenting sign of an underlying medical condition, but men with abnormal semen parameters may be at a higher risk of

malignancy. Testicular cancer risk increases up to 20-fold in men with abnormal semen parameters. This risk even translates to first-degree relatives of men with abnormal semen analyses. It has also been suggested that male infertility may be related to an increased risk of prostate cancer.

Advanced maternal age has long been known to negatively influence fertility. In many countries, the average age of paternity is rising and increasing reports demonstrate that advanced age similarly affects male fertility. Contemporary evidence confirms that older men have worse semen parameters, poorer reproductive outcomes with unassisted pregnancy, and an increased risk of health problems in their offspring.

Another recognized cause of male infertility relates to unintended impacts due to medications. Young men may require medications that can decrease fertility and alter the hypogonadal–pituitary–gonadal axis. These medications include chemotherapeutic agents, psychotropic medications, long-term corticosteroid use, calcium-channel blockers, alpha-blockers, 5-alpha reductase inhibitors (for androgenic alopecia/male pattern baldness), or testosterone replacement therapy.

Testicular Sperm Extraction (TESE) has historically been used only for men who have azoospermia, Sperm DNA fragmentation is a novel and potentially valuable tool for male fertility evaluation.

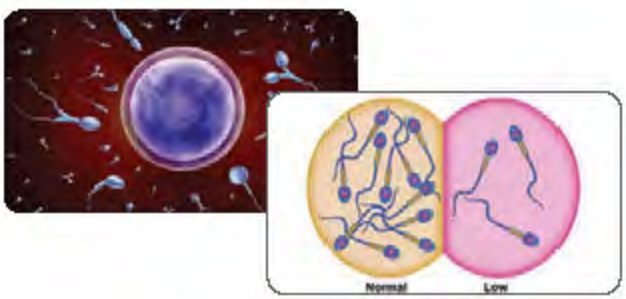
Ingredients and Medicinal Uses of Youvangrit Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Dry Extract of:				
Gokhru (Wl. Pl.)	*Tribulus terrestris*	Pushtikar, Vrishya	• Nourishing • Aphrodisiac	58 mg
Panras (Lf.)	*Piper betle*	Vrishya, Deepana	• Aphrodisiac • Improve digestion	23 mg
Fine Powder of:				
Ashwagandha (Rt.)	*Withania somnifera*	Rasayana, Vrishya	• Rejuvenating • Aphrodisiac	14 mg
Salam mishri (Rt.)	*Orchis latifolia*	Kaphaghan, Vrishya	• Spermatogenic • Pacifying kapha	58 mg
Salam panja (Rt.)	*Dactylorhiza hatagirea*	Brimhana, Vrishya	• Nourishing • Aphrodisiac	58 mg
Kounch shuddha (Sd.)	*Mucuna pruriens*	Vajikaraka, Balya	• Nutritive • Strengthening	14.75 mg
Shatavar (Rt.)	*Asperagus recemosus*	Balya, Vrishya	• Aphrodisiac • Strengthening	58 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Gond katira (Resin)	*Sterculia urens*	Daahashamak, Sheetal	• Strengthening	58 mg
Safed musli (Rt.)	*Chlorophytum arundinaceum*	Rasayana, Vrishya	• Rejuventive • Nourishing	35 mg
Javitri (Fr. R.)	*Myristica fragrans*	Deepana, Vajikaraka	• Improve digestion • Increase virility	14 mg
Jaiphal (Sd.)	*Myristica fragrans*	Deepana, Vrishya	• Aphrodisiac • Improve digestion	23 mg
Shuddha Kuchla (Sd.)	*Strychnos nux-vomica*	Balya, Vajikaraka	• Aphrodisiac • Strengthening	2 mg
Akarkara (Rt.)	*Anacycnus pyrethrum*	Vatahara, Shukrala	• Aphrodisiac • Useful in premature ejaculation	14 mg
Swarn Bhasm	Classical Preparation	Rasayana, Brimhana	• Rejuvenating • Strengthening	0.25 mg
Vang Bhasm	Classical Preparation	Balviryakara	• Rejuvenating	6 mg
Shilajit Shuddha	Classical Preparation	Rasayana	• Rejuvenating	58 mg
Moti Pishti	Classical Preparation	Dahanashaka	• Alleviates burning sensation	6 mg

Youvangrit Gold is Useful in:

- **Male Infertility**
- **Abnormal Sperm Motility**
- **Oligospermia**
- **Azoospermia**



Youvangrit Gold: Description in Classical Texts:

Youvangrit Gold is formulated by using a very effective combination of herbs and metaalic preparations that are traditionally used in Ayurveda.

Gokhru comes under Guduchyadi varga in bhavprakash nighantu; is sweet in taste and has cold potency and light, dry property. It pacifies vata and is aphrodisiac. It cures calculi, polyuria, and heart ailments.

Panras comes under Guduchyadi varga in bhavprakash nighantu. It is pungent, bitter and astringent in taste, and hot potency and has light, clear and sharp property. It pacifies vata & kapha doshas and is useful in halitosis; debility. Ashwagandha; comes under Guduchyadi varga in bhavprakash nighantu; and is astringent and bitter in taste. Physical property is lightness. This drug is hot in potency and pacifies vata, kapha doshas. Acts as sermopiotic and is useful in Leucoderma, edema, phthisis.

Kounch shuddha comes under Guduchyadi varga in bhavprakash nighantu; and is sweet and bitter in taste. It has heavy property; pacifies vata, pitta and kapha doshas. Acts as aphrodisiac and used in blood diseases. Shatavar; comes under Guduchyadi varga in bhavprakash nighantu; is sweet and bitter in taste, has heavy and unctous property and has cold potency. It pacifies vata, dosha and is aphrodisiac, nootropic and galactagouge. Safed Musli; comes under Guduchyadi varga in bhavprakash nighantu; is sweet and bitter in taste; has heavy property and hot potency. It pacifies vata, dosha.

Javitri comes under Karpuraadi varga in bhavprakash nighantu. It is sweet and pungent in taste, and hot potency; with light property. It pacifies kapha dosha. Jaiphal; comes under Karpuraadi varga in bhavprakash nighantu; is pungent and bitter in taste, and hot potency. It has light and sharp property and pacifies vata & kapha doshas. Shuddha Kuchla; comes under Amraadiphala varga in bhavprakash nighantu; is bitter in taste, and cold potency. It has light and dry property and pacifies pitta & kapha doshas. Akarakara is having pungent taste with dry and sharp qualities with hot potency. This drug pacifies kapha and vata doshas.

Swarna Bhasma is believed to be particularly effective in treating male infertility. Ayurvedic practitioners believe that Swarna Bhasma can enhance the quality of semen, leading to improved fertility. Vang bhasm; is salty and astringent with lightness and dryness with a cold potency. Useful in male infertility and premature ejaculation. Baheda; It is astringent in taste, with hot potency and has light and dry property. It has sweet vipaka and pacifies pitta & kapha doshas.

Scientific Evidence of Youvangrit Gold:

Patanjali Research Foundation has done detailed studies to find out the efficacy of Youvangrit Gold in erectile dysfunction. Youvangrit Gold was evaluated for its in-vivo efficacy in rat model of diabetes induced erectile dysfunction. In this model rats were rendered diabetic by administration of streptozotocin and were maintained in the hyperglycemic state for 9 weeks. Subsequently, they were screened for the development of

erectile dysfunction by injecting apomorphine subcutaneously and recording the number of penile erections in a dark observation box for 30 minutes. Erectile dysfunction was successfully established in all the diabetic animals, reflected by a significant decrease in the number of penile erections. Histopathological analysis of the corpus cavernosum tissue revealed the development of fibrosis in penile tissue and loss of smooth muscle. Furthermore, the levels of endothelial nitric oxide synthase enzyme, the indispensable enzyme involved in the erectogenic pathway was significantly reduced and expression of PDE5 gene was significantly lowered in diseased animals. Youvangrit Gold administered by oral route for 9 weeks' post-disease induction, dose dependently increased the number of penile erections, restored the damaged histoarchitecture or corpus cavernosum and restored the levels of eNOS as well as PDE5 expression. Consequently, the study outcomes demonstrate the potential clinical utility of Youvangrit Gold in treatment of erectile dysfunction frequently reported by patients suffering from diabetes.

For phytochemical study of compounds present in Youvangrit Gold Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array Detector (PDA) was performed. It was found that Youvangrit Gold apart from minerals like gold, tin, calcium, contains gallic acid at 6.251 minutes, chlorogenic acid at 9.881 minutes, ellagic acid at 13.468 minutes, and benzoic acid at 16.691 minutes. UHPLC chromatogram of Youvangrit Gold along with reference standards are shown in Fig. 1

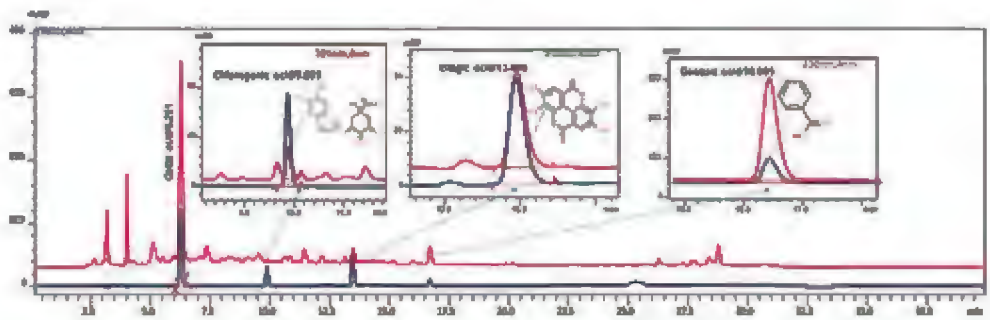


Fig 1: Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array Detector (PDA) confirms the presence of gallic acid at 270 nm wavelength, chlorogenic acid at 325 nm, ellagic acid at 254 nm, and benzoic acid at 310 nm.

Dose and Method of Use of Youvangrit Gold:

Dose and Frequency	2 Capsules, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

Santati Sudha

Tablet

SANTATI SUDHA सन्तति सुधा

Introduction to Pelvic Inflammatory Disease and Difficulty in Conceiving:

Any intrinsic or extrinsic stimulus that evokes a biological response is known as stress. The compensatory responses to these stresses are known as stress responses. Based on the type, timing and severity of the applied stimulus, stress can exert various actions on the body ranging from alterations in homeostasis to life-threatening effects and death. In many cases, the pathophysiological complications of disease arise from stress and the subjects exposed to stress, e.g. those that work or live in stressful environments, have a higher likelihood of many disorders.

Stress can be either a triggering or aggravating factor for many diseases and pathological conditions. Acute stress increases resistance to infection. The alteration of this mechanism in chronically stressed people impairs the organism's ability to mount a strong immune response with a resultant increase in morbidity. Acute stress induces a probable sympatho-adrenergically mediated increase in chemotaxis and adhesion molecules expression, thus promoting immune cells migration to sites of infection and/or inflammation, while chronic stress impairs this mechanism. Protracted stressful conditions decrease NK cytotoxic capacity. There is a substance P, which under stressful circumstances mediates the increase in macrophage cytokine production. Acute stress increases T cell mobilization through a beta2-adrenergically mediated process, which is blunted during chronic stress. Psychological stress impairs the immune system's ability to produce antibodies in response to a vaccine, thereby making the organism more vulnerable to infections.

Pelvic Inflammatory Disease (PID) is an infection of the upper genital tract occurring predominantly in sexually active young women. Chlamydia trachomatis and Neisseria gonorrhoeae are common causes; however, other cervical, enteric, bacterial vaginosis-associated, and respiratory pathogens, including Mycobacterium tuberculosis, may be involved. PID can be acute, chronic, or subclinical and is often underdiagnosed. Untreated PID can lead to chronic pelvic pain, infertility, ectopic pregnancy, and intra-abdominal infections. The diagnosis is made primarily on clinical suspicion, and empiric treatment is recommended in sexually active young women or women at risk for sexually transmitted infections who have unexplained lower abdominal or pelvic pain and cervical motion, uterine, or adnexal tenderness on examination. Mild to moderate disease can be treated in an outpatient setting with a single intramuscular injection of a recommended cephalosporin followed by oral doxycycline

for 14 days. Additionally, metronidazole is recommended for 14 days in the setting of bacterial vaginosis, trichomoniasis, or recent uterine instrumentation. Hospitalization for parenteral antibiotics is recommended in patients who are pregnant or severely ill, in whom outpatient treatment has failed, those with tubo-ovarian abscess, or if surgical emergencies cannot be excluded. Treatment does not change in patients with intrauterine devices or those with HIV. Sex partner treatment is recommended; expedited partner treatment is recommended where legal. Prevention of PID includes screening for C. trachomatis and N. gonorrhoeae in all women younger than 25 years and those who are at risk or pregnant, plus intensive behavioral counseling for all adolescents and adults at increased risk of sexually transmitted infections.

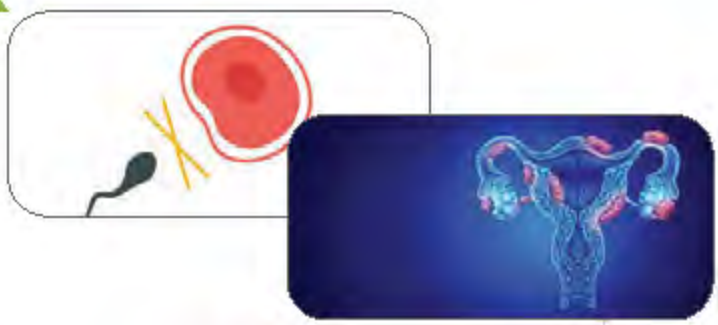
Stress and pelvic infection along with hormonal imbalance leads to difficulty in conceiving and infertility issued which is some how directly and indirectly interlinked with diet, lifestyle, socio-economic factors and environmental factors.

Ingredient and Medicinal Uses of Santati Sudha:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Putrajivak (Sd.)	*Putranjiva roxburghii*	Garbh Dayak, Praja Sthapak	• Promote conception • Retain pregnancy	200 mg
Shivlingi (Sd.)	*Bryonia laciniosa*	Praja Sthapak	• Retain pregnancy	200 mg
Shatavar (Rt.)	*Asparagus racemosus*	Vay Sthapak, Rasayan	• Prevent ageing • Rejuvenating	50 mg
Shuddh Konch (Sd.)	*Mucuna pruriens*	Vat Nadi Balya Poshak	• Strengthens nervous system • Nourishing	50 mg

Santati Sudha is Useful in:

- **Infertility**
- **Pelvic Inflammatory Disease**



Santati Sudha: Description in Classical Texts:

Santati sudha is useful in management of infertility and Pelvic Inflammatory Disease. It is made up of extracts of four herbs that are traditionally practiced in Ayurveda.

Putrajivak is sweet, salty and pungent in taste with qualities of heaviness and dryness; cold potencyand katu vipaka. It pacifies kapha and vata doshas. Shivlingi has pungent and bitter in taste with qualities of lightness, dryness and sharpness as well as a hot potency. It pacifies kaphadosha.

Shatavar comes under Guduchyadi varga in bhavprakash nighantu; is sweet and bitter in taste, has heavy and unctous property and has cold potency. It pacifies vata, dosha and is aphrodisiac, nootropic and galactagouge. Shuddh konch is sweet and bitter in taste with madhura vipaka. It has heaviness and unctuousness as qualities. It has hot potency and balances all three doshas.

Scientific Evidence of Santati Sudha:

Analysis of Santati Sudha was done by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Santati Sudha, benzoic acid was obtained as the main compound at 230 nm wavelength, as shown in Fig. 1. In the chromatograms, the dark blue line shows the standard and pink line indicates the test sample.

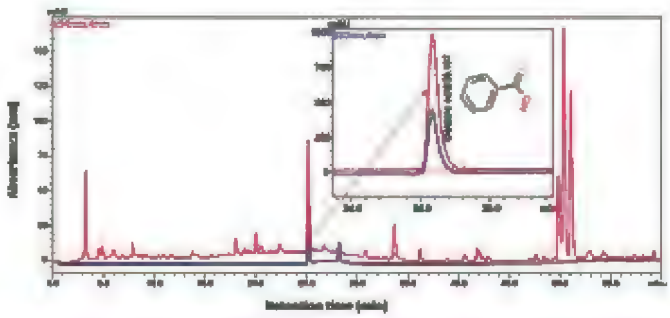


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Santati sudha. In Santati sudha, the main compound was found benzoic acid at 230 nm wavelength. In the chromatograms, the dark blue line shows the standard and pink line indicates the test sample.

Dose and Method of Use of Santati Sudha:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

NARI KANTI
नारी कान्ति

Introduction to Menstrual Disorders, Abnormal Uterine Bleeding and Leucorrhea:

Menstrual issues are quite prevalent in adolescence and can result in a great deal of stress for both the patients and their parents. The hypothalamic-pituitary-ovarian (HPO) axis' immaturity is the primary source of the wide range of menstrual cycle variations that occur at this age. Dysmenorrhea, abnormal uterine bleeding, and primary or secondary amenorrhea are conditions that need to be carefully evaluated in a logical and step-by-step fashion. The absence of menarche is referred to as primary amenorrhea, while the cessation of menses after they have started is referred to as secondary amenorrhea.

One of the most urgent gynaecological issues in adolescence is the occurrence of irregular, protracted, or heavy abnormal uterine bleeding. Dysfunctional uterine bleeding should only be diagnosed after all other organic and structural causes of abnormal vaginal bleeding have been ruled out. Dysmenorrhea, which is the most typical cause of a young girl visiting a gynaecologist, is a medical term for painful menstruation. In the absence of an underlying organic condition, it is classified as primary, and when pelvic pathology is present, it is classified as secondary. In order to reduce the likelihood of difficulties affecting a woman's capacity to reproduce in the future, the patient needs to be managed appropriately and quickly. As many as 87% of women report having menstruation difficulties. With a prevalence of 60% to 93%, dysmenorrhoea is the most prevalent gynaecological condition among female patients.

Due to their stressful lifestyles, erratic eating patterns, and irregular exercise routines, there is a considerable risk of experiencing menstruation abnormalities. Long-term menstrual irregularity can lead to anovulation, endometrial hyperplasia, infertility, as well as a loss in quality of life. Menstrual disorders are treated according to their kind and symptoms. If stress, excess weight, or excessive activity are regarded to be the root causes of the illness, changing one's lifestyle may help.

Women who have infrequent periods may be advised to utilize oral contraception or hormone therapy. Hormone therapy, endometrial ablation, dilatation and curettage, or hysteroscopic procedures to remove polyps that may be causing symptoms are all possible treatments for abnormal uterine bleeding. Pregnancy is made possible by the menstrual cycle, a distinctive physiological occurrence in the reproductive system of female animals. The regularity of menstruation cycles is seen as a sign of a woman's reproductive health; alterations in the menstrual cycle can occur for

a variety of reasons, but they are frequently linked to disorders of the ovaries-thyroid and pituitary axis.

Polycystic Ovary Syndrome (PCOS), which has been linked to 87% of women with irregular menstrual periods, results in lengthy menstrual cycles or oligomenorrhea (>35 days), which are frequently observed in PCOS patients, insulin resistance and unbalanced ovarian function. The differential diagnosis for a patient who has stopped having periods or has stopped having menstrual cycles relies on whether the patient has primary or secondary amenorrhea. In contrast, symptoms like galactorrhea and headaches would suggest an excess of prolactin from a prolactinoma. Associated symptoms like hirsutism can suggest exposure to too many androgens (hyperandrogenism) as a result of conditions like PCOS or congenital adrenal hyperplasia. Medications, such as birth control pills, IUDs, hormone therapy, gonadotropin-releasing hormone agonists, and antibiotics, are frequently the first line of treatment for irregular periods. Surgery like Endometrial ablation, Myomectomy, Uterine artery embolisation, and Hysterectomy may be advised by the doctor if medicine is ineffective.

An another gynaecological disorder known as Abnormal Uterine Bleeding (AUB) is characterised by erratic, heavy, or protracted uterine bleeding. It may be a sign of an underlying health problem and can have a substantial influence on a woman's quality of life. Unusual uterine bleeding causes include: Hormonal Imbalances: Variations in the amounts of the hormones progesterone and oestrogen might impede the normal menstrual cycle, which can result in AUB. Polycystic Ovarian Syndrome (PCOS), thyroid issues, and perimenopause are examples of common hormonal reasons. Uterine Fibroids: Non-cancerous growths in the uterus known as fibroids can cause heavy or prolonged menstrual bleeding. Options for treating AUB are Hormone Replacement Therapy (HRT), Hormonal Intrauterine Devices (IUDs), and birth control tablets may all help decrease menstrual bleeding. Nonsteroidal Anti-Inflammatory Drugs (NSAIDs), Surgical Interventions: In severe situations, hysterectomy (removal of the uterus) or endometrial ablation (removal of the uterus) may be advised. Controlling issues like PCOS, thyroid issues, or infections can aid in the eradication of AUB.

Vaginal discharge, also known as leucorrhoea, is a prevalent ailment that affects lots of women. It describes an odorless, white or yellowish discharge from the vagina that is frequently accompanied by itchiness and irritation. Although some vaginal discharge is typical and beneficial to vaginal health, an excessive or unusual discharge may point to a more serious issue. Numerous factors, such as hormone imbalances, infections, sexually transmitted illnesses, or inadequate hygiene, might contribute to leucorrhea. Although it can happen at any age, it is most common during the reproductive years. Stress, pregnancy, and specific drugs can also have an impact on how it develops. The underlying cause of leucorrhoea must be found and treated in order to address the condition. It is advised to seek the advice of a healthcare professional to identify the underlying cause through a comprehensive examination, medical history, and laboratory tests. Treatment options include taking antibiotics or antifungal drugs to treat infections, hormone therapy to balance hormones, or changing one's lifestyle to practice good hygiene and wear breathable pants.

Ingredients and Medicinal Uses of Nari Kanti:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Shatavar (Rt.)	*Asparagus racemosus*	Stanya Janak, Shoth Har, Balya	• Galactogogues • Anti-inflammatory • Strengthening	150 mg
Shisham (Lf.)	*Dalbergia sissoo*	Garbhashay shodhak, Shosh Har	• Promotes conception • Clarifying • Alleviates emaciation	75 mg
Jai Jamini (Wl.Pl.)	*Cocculus hirsulus*	Balya, Shoth Har	• Strengthening • Anti-inflammatory	75 mg
Nagkesar (Fl.)	*Mesua ferrea*	Rakta Pradar Har	• Alleviates abnormal bleeding	25 mg
Gokhru (Wl.Pl.)	*Tribulus terrestris*	Shoth Har, Balya, Basti dosh Har	• Anti-inflammatory strengthening • Alleviates diseases of bladder	75 mg
Ashoka (Bk.)	*Saraca asoca*	Aartav Vikar Har, Pradar, Roghar	• Alleviates menstrual disorders • Alleviates abnormal vaginal discharges	50 mg
Supari (Sd.)	*Areca catechu*	Pradar Rog Har	• Alleviates abnormal vaginal discharges	50 mg

Nari Kanti is Useful in:

- **Menstrual Disorders**
- **Leucorrhea**
- **Abnormal Uterine Bleeding**

Nari Kanti: Description in Classical Texts:

One of the main component of Nari Kanti is Shatavari, which is bitter and sweet in taste. It is heavy and unctuous in quality. Its vipaka is madhura and it is cold in potency. It pacifies vata and pitta doshas. It is rejuvenating and promotes strength as well.

Shisham is under vatadi varga in bhava prakasha. It has astringent, pungent and bitter tastes with qualities of lightness and dryness; hot potency and katu vipaka. It pacifies kapha and vata doshas.

Jai jamini is under Guduchyadi varga in Bhava Prakasha. It has bitter taste, with quality of lightness and stickiness; hot potency and katu vipaka.

Nagkesar was under karpuradi varga in Bhava prakasha. It has astringent and bitter tastes with qualities of dryness, piercing and lightness; hot potency and katu vipaka.

Bhavaprakasha has included Gokshura/Gokhru drug under Guduchyadi varga. It has sweet taste. It is cold in potency and having Madhura vipaka. It is promoting strength, clears the bladder and anti-nephrolithiasis in activity.

Bhava prakasha kept Ashoka in pushpadi varga. It has astringent and bitter tastes with qualities of lightnes and dryness;cold potency and katu vipaka.

Bhava prakasha included Supari in vatadi varga. It has bitter and astringent tastes with qualities of lightness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas.

Scientific Evidence of Nari Kanti:

To study the major phytochemical present in Nari Kanti Reverse Phase Ultra Performance Liquid Chromatography (RP-UHPLC) was developed. Seven major phytochemicals namely gallic acid at 7.85 minutes, protocatechuic acid at 15.56 minutes, magnoflorine 17.17 minutes, methyl gallate at 21.52 minutes, vanillic acid 23.62 minutes, rutin at 41.65 minutes and beta ecdysone at 43.04 minutes was found to be present in Nari Kanti tablet. The overlay chromatogram of reference standard (in blue colour) and Nari Kanti tablet (Orange colour) are shown in Fig. 1.

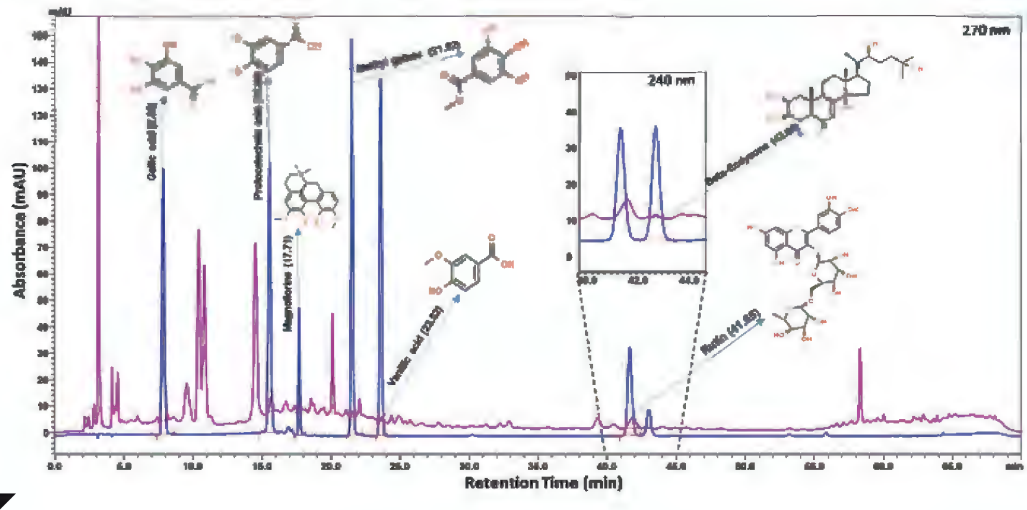


Fig. 1: Ultra Performance Liquid Chromatography (UHPLC) combine with Photo Diode Array Detector (PDA) confirm the presence of gallic acid at 7.85 minutes, protocatechuic acid at 15.56 minutes, magnoflorine 17.17 minutes, methyl gallate at 21.52 minutes, vanillic acid 23.62 minutes, and rutin at 41.65 minutes on analyzing at 270 nm wavelength. Similarly, at 240 nm wavelength beta ecdysone was observed at 43.04 minutes.

Dose and Method of Use of Nari Kanti:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Vaginal Pessary

VAGINOGRIT
वेजायनोग्रिट

Introduction to Vaginal Fungal Infections:

A fungus, primarily *Candida albicans*, is what causes vaginal fungus infections. Also known as Vulvo-Vaginal Candidiasis (VVC), genital candidiasis, and candidiasis. Skin, mucous membranes, heart valves, the oesophagus, and other bodily parts are just a few of the sites where such an infection can spread. The vagina and vulva may itch and become inflamed, and there may be a burning sensation, particularly during sexual activity or urination. The vulva may also become red and swollen, and there may be pain and soreness in the vagina. It's crucial to consult your doctor for a correct diagnosis and treatment if you think you could have a vaginal fungal infection. Antifungal drugs are available as creams, pills, or suppositories as a means of treatment.

Vaginal problems are quite typical. In women of reproductive age, vulvovaginitis, or inflammation of the vulva and vagina, most frequently develops as a result of infectious pathogens. About one third of cases are caused by candidal vulvovaginitis.

Candida species, most frequently *Candida albicans,* infection results in inflammatory alterations in the vaginal and vulvar epithelium, which leads to candidal vulvovaginitis. Many women have candida as part of their regular flora, which is frequently asymptomatic. As a result, for there to be candida in the vagina or vulva, there must also be irritation, itching, dysuria, or inflammatory signs.

Candida species can induce vulvovaginitis by superficially penetrating the mucosal lining of the vagina and triggering an inflammatory reaction. Polymorphonuclear cells and macrophages are frequently the most prevalent inflammatory cells. Patients may also exhibit excoriations, "external" dysuria, vaginal itching, vaginal burning, dyspareunia, or edoema in addition to the discharge, which is frequently thick and sticky.

Antifungal medications are used to treat acute candidal vulvovaginitis. The most effective treatments for candidal vulvovaginitis are azole antifungals since *C. albicans* does not exhibit substantial resistance to them and because the majority of cases of the condition are caused by this organism. Antifungals can be applied intravaginally in a single day or 3-day regimens that are available over the counter, or they can be taken orally as a single dose (150 mg of fluconazole). Either treatment is equally effective in persons with uncomplicated

illness (those without immunosuppression or pregnancy who do not have recurring candidal vulvovaginitis).

Cultures may be necessary to test for other species of candida, which are frequently resistant to azoles, if patients do not respond to normal therapy.

Longer treatment is necessary for people with complex candidal vulvovaginitis, such as immunosuppressed patients. Typically, treatment involves either oral fluconazole 150 mg once every three days for three doses, or intravaginal azole therapy for at least a week (renally adjusted for CrCl 50 ml/min). Weekly oral fluconazole medication for six months may be beneficial for patients with recurrent candidal vulvovaginitis. Oral antifungals shouldn't be administered to pregnant patients. A 7-day intravaginal treatment course is appropriate for these patients. Fluconazole is thought to be secure in lactating mothers as well.

Ingredients and Medicinal Uses of Vaginogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Wheatgrass (Lf.)	*Triticum aestivum*	Vatapittahara	• Pacifies vata and pitta doshas	250 mg
Oil of:				
Ashwagandha (Sd.)	*Withania somnifera*	Rasayana	• Rejuvenating	250 mg

Vaginogrit is Useful in:

- **Vaginal Fungal Infections and Associated Symptoms**

Vaginogrit: Description in Classical Texts:

Vaginogrit is an Ayurvedic proprietary medicine used for vaginal fungal infections and associated symptoms.

Wheatgrass has sweet taste with qualities of heaviness and unctousness; cold potency and madhura vipaka. Balances vata and pitta doshas.

Ashwagandha is pungent and bitter in taste, and hot potency, with dry property. It pacifies pitta dosha. It is useful in skin diseases, polyuria, ulcer, and disease caused by vitiation of blood.

Scientific Evidence of Vaginogrit:

To evaluate the phytochemical present in Vaginogrit High Performance Liquid Chromatography (HPLC) analysis was performed at 254 nm wavelength. Analysis confirms that about 20 major phytochemicals are present in Vaginogrit that are responsible for its efficacy. Fig. 1 depicts HPLC fingerprint and elution pattern of compounds. Table 1 evaluates the area contribution of individual compounds. Further Gas Chromatography with a mass detector (GC MS/MS) confirms the presence of butylated hydroxytoluene, oleic acid and beta eudesmol as shown in Fig. 2. These compounds were further confirmed by mass fragmentation studies and comparing with National Institutes of Standards and Technologies (NIST) database.

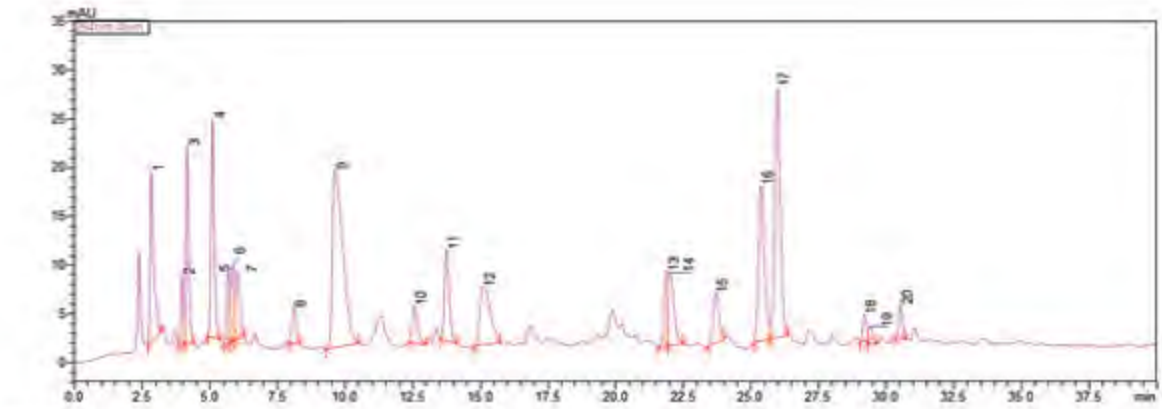


Fig. 1: High Performance Liquid Chromatography (HPLC) analysis at 254 nm wavelength confirms the presence of twenty major phytoconstituents. The area and area percentage of individual compounds are shown in table 1.

S. N.	Retention Time (Minutes)	Area	Area %
1	2.833	166556	6.618
2	3.976	44460	1.767
3	4.158	145115	5.766
4	5.101	187634	7.456
5	5.679	60512	2.405
6	5.843	65257	2.593
7	6.023	72778	2.892
8	8.107	38525	1.531
9	9.633	487248	19.362
10	12.563	47756	1.898

S. N.	Retention Time (Minutes)	Area	Area %
11	13.75	117315	4.662
12	15.094	155884	6.194
13	21.873	78701	3.127
14	22.013	97439	3.872
15	23.693	74473	2.959
16	25.371	239584	9.52
17	25.963	360673	14.332
18	29.191	29180	1.16
19	29.399	17267	0.686
20	30.506	30203	1.2

Table 1: Number of compounds present in Vaginogrit, there area, and area percentage found during High Performance Liquid Chromatography (HPLC) analysis

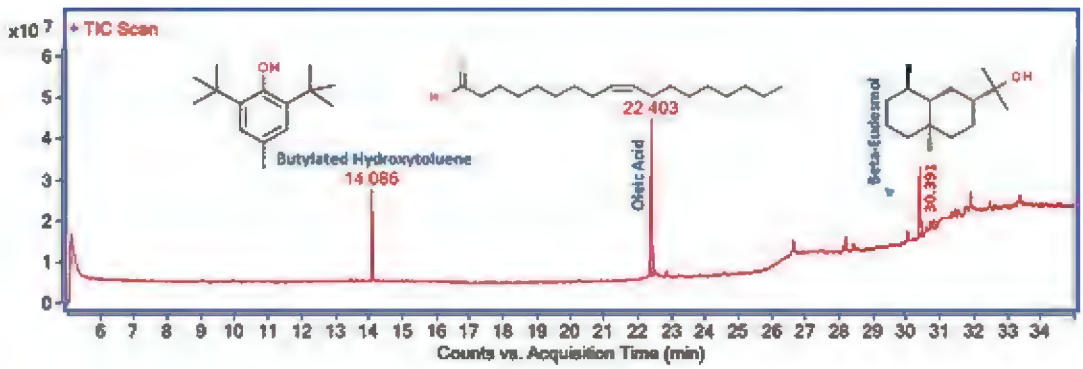


Fig. 2: Gas Chromatography equipped with Mass Detector (GC MS/MS) confirms the presence of butylated hydroxytoluene, oleic acid and beta eudesmol at 14.086, 22.403 and 30.391 minutes respectively in Vaginogrit.

Dose and Method of Use of Vaginogrit:

By using dry hands, gently insert the pessary from the pointed end into the vagina. Use once a day at bedtime for seven days or as directed by the physician.

For further Information /Reading Scan the QR Code

Tablet

ARSHOGRIT
अर्शोग्रिट

Introduction to Hemorrhoids, Piles and Anal Fistula:

Hemorrhoidal disease is a common benign anorectal condition. It affects millions of people worldwide and is a major medical and socioeconomic issue. The anastomoses between the superior rectal artery and the superior, middle, and inferior rectal vein that surround the distal rectum and anal canal are referred to as hemorrhoids. It is caused by hemorrhoidal cushion distal displacement and venous distention. Hemorrhoids are classified into two types based on their level of anus. Internal and external piles are the two types. Internal piles are classified into four degrees based on the symptoms they produce. Hemorrhoids are classified as follows based on their symptoms:

Grade I: The hemorrhoids do not prolapse, only bleeding from the rectum occurs.

Grade II: The hemorrhoids prolapse upon defecation, but spontaneously reduce.

Grade III: The hemorrhoids prolapse upon defecation, but reduce after manipulation.

Grade IV: The hemorrhoids are prolapsed and remain prolapsed.

Inadequate dietary fiber, constipation, diarrhea, hypertension, a high Body Mass Index (BMI), pregnancy, and old age have all been identified as risk factors for the development of hemorrhoids in other studies. Hemorrhoids are usually asymptomatic, but common symptoms include bleeding with or without defecation, swelling, mild discomfort or irritation. Though some patients require surgery, many hemorrhoid patients can be successfully treated with non-surgical medications and ointments. Hemorrhoids are caused by a weakening of the anal cushion, which causes the hemorrhoids to descend or prolapse and the internal sphincter to spasm. Fissures and hemorrhoids are two common diseases of the anorectal region reported in the human body. The extent of fissures and hemorrhoids is more common in today's era due to improper faulty lifestyle choices and unhealthy eating habits.

An improper connection between two epithelial surfaces is referred to as a fistula. An anal fistula is a connection between the granulation tissue-lined perianal epidermis and the anorectal canal. When having conversations with patients, it could be helpful to visualize it as a tunnel. The fistula may contain a persistent infection that leaks occasionally or continually onto the skin through the orifice. Various long-lasting or sporadic symptoms of anal fistula include pain, drainage, and embarrassment in public. Men are twice as likely to be affected,

and it most commonly presents in the third, fourth, and fifth decades, with a peak around 40 years of age. In order to cure an anal fistula, the original opening, any related tracts, and any secondary openings must be closed off without affecting continence. A fistulotomy, which has a low recurrence rate and an acceptable rate of morbidity, can be used to treat the majority of uncomplicated anal fistulae. Complex anal fistula therapy, which is defined as a fistula whose management increases the danger of a change in continence, is still difficult. There are numerous treatment options available, which speaks to the varying complexity of anal fistulae and their unpredictable and non-reproducible outcomes. Prior to making any attempt at repair, it is extremely advised to identify secondary expansions and tracts of the anal canal fistula and control sepsis in order to increase healing rates.

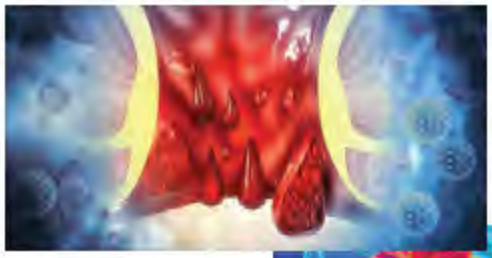
Ingredients and Medicinal Uses of Arshogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extracts of:				
Makoy (Wl.Pl.)	*Solanum nigrum*	Tridoshshamak, Rasayan	• Pacifies all three doshas • Rejuvenating	12.5 mg
Aloevera (Lf.)	*Aloe barbadensis*	Rasayan, Raktvikar nashak	• Rejuvenating • Alleviates diseases of blood	12.5 mg
Nagdona (Lf.)	*Pupalia lappacea*	Pitta Kapha shamak, Vranadosh Har	• Pacifies pitta and kapha doshas • Wound cleanser	12.5 mg
Mahua (Fl.)	*Madhuca indica*	Vatpittashamak, Raktavikar Har	• Pacifies vata and pitta doshas • Alleviates blood diseases	9.8 mg
Vaividang (Fr.)	*Embelia ribes*	Raktshodhak, Hridya	• Purifies blood • Cardiotonic	9.8 mg
Gokhru (Fr.)	*Tribulus terrestris*	Agnidipak, Arsharoghar	• Increases digestive power • Alleviates hemorrhoids	1.95 mg
Nishoth (Rt.)	*Operculina turpethum*	Kapha pita shamak shothhar	• Pacifies kapha pitta doshas • Anti-inflammatory	1.95 mg
Dhaniya (Fr.)	*Coriandrum sativum*	Deepan, Pachak, Tridosh shamak	• Increases digestive power • Pacifies all three doshas	1.95 mg
Dhai Phool (Fl.)	*Woodfordia fruticosa*	Raktapittanashak	• Alleviates bleeding diseases	1.95 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Indrayan (Rt.)	*Citrullus colocynthis*	Pittakaphashamak, Vrananashak	• Pacifies pitta and kapha doshas • Wound-healing	1.95 mg
Chavya (St.)	*Piper retrofractum*	Shoolnashak, Arshrognashak	• Pain relieving • Alleviates hemorrhoids	1.95 mg
Saunf (Fr.)	*Foeniculum vulgare*	Deepan, Pachak	• Improves digestive power	1.95 mg
Sonth (Rh.)	*Zingiber officinale*	Agnidipak, Malbhedaak	• Increases digestion • Alleviates constipation	1.95 mg
Danti (Rt.)	*Baliospermum montanum*	Shoothhar, Arsharoghar	• Anti-inflammation • Alleviates hemorrhoids	1.95 mg
Mochras (Exd.)	*Bombax malabaricum*	Balya, Vedna-shthapak	• Strengthening • Reduces pain	1.95 mg
Harad Chhoti (Fr.)	*Terminalia chebula*	Mridurechak, Arshrognashak	• Mild laxative • Alleviates hemorrhoids	100 mg
Rasaut Shuddh (Rt.)	*Berberis aristata*	Deepan, Pachak, Shooth Har	• Increases digestive power • Anti-inflammatory	150 mg
Kapoor Desi (Wd.)	*Cinnamomum camphora*	Deepan, Vata Har, Shooth Har	• Increases digestion • Pacifies vata dosha • Anti-inflammatory	5 mg
Fine Powders of:				
Bakayan (Fr.)	*Melia azedarach*	Vednahar, Arsharoghar	• Pain-relieving • Alleviates hemorrhoids	100 mg
Nimoli (Fr.)	*Azadirachta indica*	Twakdosh Har, Rasayan, Arsharog Har	• Alleviates skin problems • Rejuvenating • Alleviates hemorrhoids	100 mg
Reetha (Fr.)	*Sapindus mukorossi*	Vata Har, Vedna Har	• Pacifies vata dosha • Pain relieving	5 mg
Khunkharaba (Resin)	*Daemonorops draco*	Raktaatisarnashak	• Alleviates bleeding per rectum	2.5 mg

Arshogrit is Useful in:

- **Hemorrhoids**
- **Piles**
- **Fistula**



Arshogrit: Description in Classical Texts:

Arshogrit is formulated by using the appropriate combination of herbs used in conditions like hemorrhoids and fistula traditionally in Ayurveda. Makoy called as Kakamachi in Ayurvedic texts and Bhava prakasha has included it under Guduchyadi varga. It has a bitter taste with the properties of lightness and sliminess and pacifies all three doshas. This drug has neither hot, nor cool potency and katu vipaka.

Bhava prakasha has included Aloe vera in Guduchyadi varga. Aloe vera, called Kumari in Ayurveda, has purgative action as well. This drug has bitter and sweet tastes; with the qualities of heaviness and strengthening; cold potency and madhura vipaka. It pacifies vata and kapha doshas. Nagdona/Nagadamani which comes under Guduchyadi varga in Bhava prakasha is pungent and bitter in taste; having the quality of lightness with hot potency and katu vipaka. This drug pacifies pitta and kapha doshas.

Mahua has a sweet taste with the quality of heaviness and cold potency. The vipaka is madhura and it pacifies vata and pitta doshas. Vaividang mentioned by Bhava prakasha in Hareetakyadi varga has pungent taste with sharpness, lightness and dryness; hot potency and katu vipaka. It promotes good digestion. Bhava prakasha has mentioned Gokhru in Guduchyadi varga, and it is sweet in taste and has cold potency with light and dry properties, pacifies vata dosha. and cures calculi, polyuria, asthma, cough, hemorrhoids, dysuria and heart ailments.

Nishoth is mentioned under Guduchyadi varga by Bhava prakasha, and has sweet taste with hot potency and the property of dryness. It pacifies pitta and kapha doshas. Bhava prakasha has included Dhaniya/Dhanyaka under Hareetakyadi varga. This drug is astringent, bitter and pungent in taste; hot in potency; with the qualities of unctuousness and lightness and madhura vipaka; pacifying all three doshas. It is useful in conditions like burning sensation.

Bhava prakasha has mentioned Dhai Phool/ Dhataki in hareetakyadi varga. It has pungent

and astringent tastes with the properties of lightness and softness and cold potency. It pacifies pitta dosha. It is useful in diarrhea and burning sensation.

Indrayan has been mentioned in Guduchyadi varga by Bhava prakasha. It has bitter taste with katu vipaka and hot potency with the property of lightness. Chavya is under Guduchyadi varga and is considered to be especially beneficial in hemorrhoids. It enhances digestion and pacifies kaphavata doshas.

Saunf/Mishreya has sweet, pungent and bitter tastes and madhura vipaka. It is hot in potency and has the qualities of lightness and dryness. It is able to pacify vata and kapha doshas. It increases digestive power. Sonth comes under Haritakyadi varga in bhavprakash nighantu. It is pungent in taste. Physical property is lightness and unctousness. This drug is hot in potency and pacifies vata, kapha doshas. It can cure vomiting, bronchitis, cardiac ailments, edema, tympanites, asthma,etc.

Danti has pungent taste; qualities of heaviness and sharpness; katu vipaka; hot potency and pacifies kapha and pitta doshas. It is purgative and useful in hemorrhoids. Mochras is the niryasa of shalmali. It is a coolant and has unctuousness. It is astringent and relieves diarrhea. Harad/Hareetaki is the first drug mentioned in Hareetakyadi varga by Bhava prakasha. It has sweet, pungent, sour, astringent and bitter tastes in it. It is dry in quality and hot in potency. It has madhura vipaka. This drug is a known rejuvenating drug. It acts against skin diseases.

Rasaut shuddh called Daruharidra in Ayurveda is categorized under Hareeakyadi varga by Bhava prakasha. This drug has bitter and astringent tastes. It has the qualities of dryness and lightness. It has hot potency. This drug has katu vipaka and pacifies kapha pitta doshas. Kapoor desi has cold potency; qualities of lightness; sweet and bitter tastes. It pacifies kapha and pitta doshas.

Bakayan/Mahanimba is mentioned under Guduchyadi varga in Bhava prakasha. It has cold potency, the quality of dryness, bitter and astringent tastes and pacifies kapha pitta doshas. Useful in hemorrhoids. Nimoli/Nimba is mentioned under Guducyadi varga in Bhava prakasha. It has bitter astringent tastes, light and dry qualities. It has a cold potency and its vipaka is katu. It pacifies kapha and pitta doshas. This drug is well known for its efficacy in curing various skin diseases.

Reetha/Arishtaka is mentioned under Vatadi varga by bhava prakasha. Bitter pungent tastes, lightness and sharpness, hot potency, katu vipaka, pacifies all three doshas. Khunkharaba is called Raktaniryasa in Ayurveda and has astringent taste; qualities of lightness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas.

Scientific Evidence of Arshogrit:

Patanjali Research Foundation has studied the efficacy of Arshogrit in croton-oil induced hemorrhoids. Arshogrit, the poly-herbal formulation was assessed for its efficacy in rat model of Croton-oil induced hemorrhoids. Croton oil is an oil obtained from a plant,

Croton tiglium, which is known to cause irritation and inflammatory conditions when applied topically. Its application leads to inflammation in the ano-rectal region and extravasation of blood. For the induction of the disease, COP (Croton oil preparation) was prepared by mixing deionized water, pyridine, diethyl ether and 6% Croton oil in diethyl ether in the ratio of 1:4:5:10. After 12 hours fasting, sterile cotton swabs soaked Croton oil preparation was inserted into the rectum of rats for 30 seconds for three consecutive days. Subsequently, Croton oil preparation was able to induce the disease leading to swelling, pain, redness and effusion of blood from the recto-anal area. The powdered formulation of Arshogrit administered orally and Jatyadi Ghrit applied topically was able to alleviate the hemorrhoidal symptoms as depicted by decrease in the Recto-anal coefficient (relative weight of the harvested recto-anal area compared to the animal's body weight), dose-dependent and significant decrease in the gross pathological scoring of the symptoms and in histopathology; and also in the release of the pro-inflammatory cytokines. Accordingly, Arshogrit has a therapeutic potential in the treatment of hemorrhoids.

Phytochemical study was performed using High Performance Liquid Chromatography (HPLC). The reference material used for standardization for Arshogrit are gallic acid (potency-97.3%), methyl gallate (potency-99.9%), corilagin (potency-98.0%), chebulegic acid (potency-94.1%), ellagic acid (potency-99.9%), chebulinic acid (potency-90.8%), palmetine (potency-75.1%) and berberine (potency-88.4%). A typical HPLC fingerprint of Arshogrit and reference material are shown in fig. 1

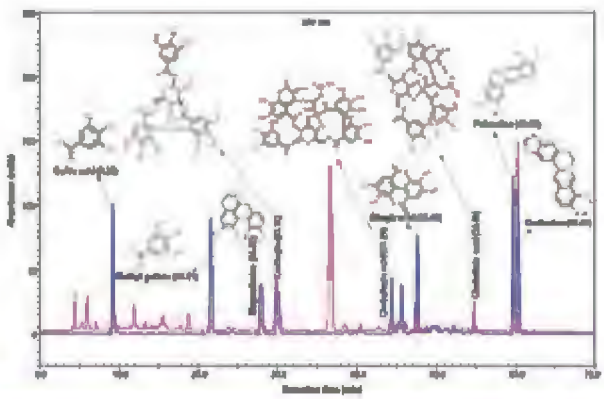


Fig. 1: High Performance Liquid Chromatography (HPLC) confirms the presence of gallic acid, methyl gallate, Magnoflorine, corilagin, chebulegic acid, ellagic acid, chebulinic acid, palmetine, and berberine at 270 nm wavelength in Arshogrit.

Dose and Method of Use of Arshogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

CORIGHAN कोरीघन

Introduction to Blood Purification:

Blood purification is a therapy based on the extracorporeal treatment of blood, and this has been widely used nowadays for the treatment of many disorders that are refractory to conventional therapies, such as drug administration and surgery. It works by removing toxins or pathogenic agents from the blood circulation through bioseparation techniques, including dialysis, filtration, adsorption, or a combination of any of these. Due to its capacity in direct and rapid removal of pathogenic agents from patients, blood-purification therapy is mainly employed in three areas clinically:

- Critical care, such as plasmapheresis for toxicants;
- Life support for organ failures, such as hemodialysis for renal failure; and
- Redress of metabolic and immune disorders, such as immunoadsorption for autoimmune diseases.

Currently, the most known application is that of hemodialysis, used in the treatment of patients with renal failure. It is estimated that more than 1 million patients, worldwide, are kept alive by hemodialysis. If there was no hemodialysis technique today, all these patients would have died of kidney failure within 2 weeks.

Several therapeutic technologies and sophisticated devices were developed and clinically applied in the last three decades. The development of these technologies is prompted by the growing understanding of hematology and pathophysiology in medical researches, as well as advances in bioseparation techniques.

Medical discoveries in pathophysiology of many diseases have greatly extended the application of blood-purification therapy. Over the past 30 years, a wide range of novel pathogenic agents existing in the blood circulation have been identified. These molecules have been found to play a key role in the pathophysiology of related diseases, such as autoimmune diseases, systemic inflammatory response syndrome, Dialysis-Related Amyloidosis (DRA), and even cancer. As the blood levels of these pathogenic agents are closely related to the progress of the diseases, as well as reflecting their severity, tremendous efforts have been made to explore the use of various blood-purification techniques to control the pathological conditions.

Targets for blood purification can cover a wide spectrum of molecules, varying in size, polarity, and chemical and biological properties. Accordingly, blood purification may be performed with many different techniques. In principle, the basis of different therapeutic approaches lies in bioseparation science. Techniques based on membrane and/or adsorption make up the main part of blood-purification strategy currently in use. Membrane techniques (hemodialysis, plasmapheresis, and ultrafiltration) separate compounds according to pore size and do not selectively remove specific components. Toxin removal is achieved by diffusion or filtration with a membrane of certain pore size. By varying the permeability of filters, different blood components can be filtered, from low-molecular-weight soluble toxins, such as uremic toxins, to middle and larger proteins, such as bilirubin-bound albumin. If the pore size is large enough to allow a permeability of approximate 100% protein, plasma exchange could be performed. Thus, membrane material and pore structure are two primary factors affecting the performance of filters. Adsorption techniques (hemoperfusion and plasma perfusion), on the contrary, can enable a more selective removal of specific compounds. The plasma or blood can be perfused through a column containing adsorbent (usually synthetic beads) coupled to specific compounds that act through their physicochemical or biological properties. Each adsorbent is characterized by its immobilized ligands, and the performance of an adsorbent can be determined directly by the properties of its ligand. Therefore, the development of adsorption techniques mainly focuses on the ligand, working toward a high specificity, good stability, and relatively low cost.

Although blood-purification techniques share the similar mechanisms with bioseparation approaches in bioengineering, they have their own characteristics and special demands. The most important issue is their hemocompatibility. It is believed that when the blood makes contact with foreign materials, a range of blood components would retain on these foreign materials, which may lead to the activation of certain components in the blood through a variety of enzymatic processes.

Hemoincompatibility can induce activation of complement and leukocyte to different extents, as well as the release of inflammatory mediators, including cytokines, nitric oxide, oxygen free radicals, and platelet activating factors. These reactions might lead to severe side effects during the blood-purification treatments. Thus, the choice of proper materials and the improvement of their hemocompatibility are always among the main concerns in the design of therapeutic devices.

Ingredients and Medicinal Uses of Corighan:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Dhaniya (Sd.)	*Coriandrum sativum*	Mutral, Dahshamak	• Diuretic • Alleviates burning sensation	250 mg
Dhaniya (Lf.)	*Coriandrum sativum*	Mutral, Dahshamak	• Diuretic • Alleviates burning sensation	250 mg

Corighan is Useful in:

- **Blood Purification**
- **Skin Diseases**
- **General Kidney Diseases**

Corighan: Description in Classical Texts:

Dhanyaka/Dhaniya is mentioned under Hareetakyadi varga in bhava prakasha. It has astringent and bitter tastes. It has light and unctuous qualities and hot in potency. It has madhura vipaka and can pacify all three doshas (vatta, pitta and kapha).

Scientific Evidence of Corighan:

Corighan tablet was analysed with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Corighan tablet, the different compounds were obtained at 254 nm wavelength mainly adenosine at 20.453 minutes, and vanillic acid at 38.848 minutes; at 325 nm wavelength neochlorogenic acid at 31.225 minutes, caffeic acid at 36.069 minutes, chlorogenic acid at 39.597 minutes, and ferulic acid at 49.665 minutes, as shown in Fig.1. In the chromatograms, the blue line shows the standard and other lines indicate the test sample.

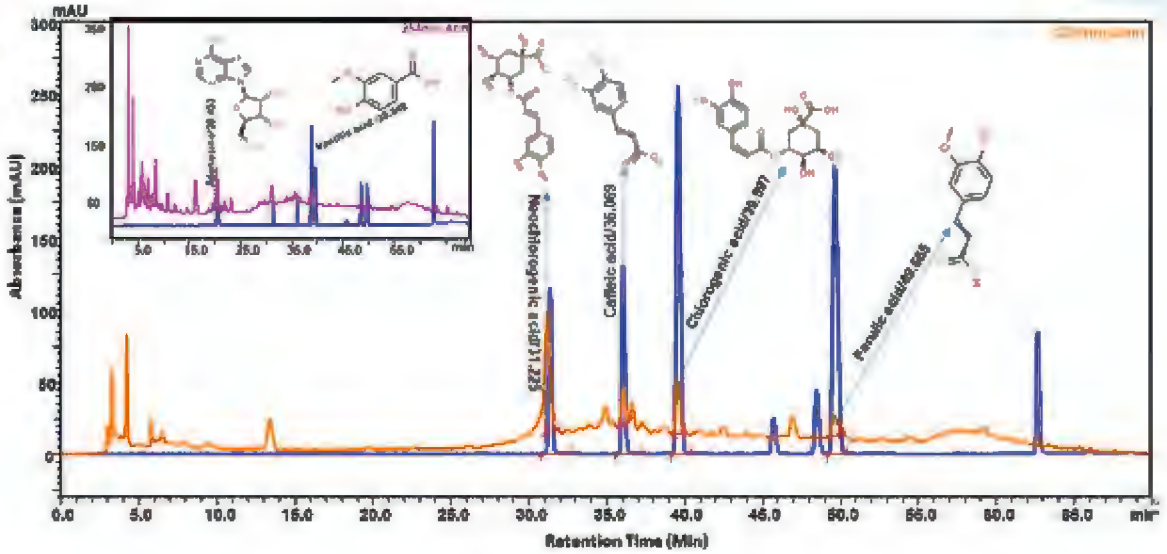


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Corighan tablet. In Corighan tablet, the compounds were observed mainly adenosine (20.453 minutes), and vanillic acid (38.848 minutes) at 254 nm wavelength; neochlorogenic acid (31.225 minutes), caffeic acid (36.069 minutes), chlorogenic acid (39.597 minutes), and ferulic acid (49.665 minutes) at 325 nm wavelength. In the chromatograms, the blue line shows the standards and other lines indicate the test sample.

Dose and Method of Use of Corighan:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

HAEMOGRIT हीमोग्रिट वाइटल Vital

Introduction to Anemia:

Anemia is a reduction in hemoglobin (Hb) or hematocrit (HCT) or Red Blood Cells (RBC) count. It is a presentation of an underlying condition and can be subdivided into macrocytic, microcytic, or normocytic. Patients with anemia typically present with vague symptoms such as lethargy, weakness, and tiredness. Severe anemia may present with syncope, shortness of breath, and reduced exercise tolerance. This activity outlines the evaluation and treatment of anemia and explains the role of the interprofessional team in managing patients with this condition. Anemia is not a diagnosis, but a presentation of an underlying condition. Whether or not a patient becomes symptomatic depends on the etiology of anemia, the acuity of onset, and the presence of other comorbidities, especially the presence of cardiovascular disease. Most patients experience some symptoms related to anemia when the Hb drops below 7.0 g/dL. Erythropoietin (EPO), which is made in the kidney, is the major stimulator of RBC production.

Tissue hypoxia is the major stimulator of EPO production, and levels of EPO are generally inversely proportional to the Hb concentration. In other words, an individual who is anemic with low Hb has elevated levels of EPO. Pandu Roga in Ayurveda can be correlated to 'Anemia'. Ayurveda focuses on tridosha balance to maintain good health. Ayurveda described Pandu as Pitta Pradhana Vyadhi associated with Rasa and Rakta Dhatu. Pandu Roga is one of the diseases mentioned in Ayurveda characterized by the changes in the skin colour to Shweta [white], Peeta [yellowish], Harita [greenish] etc. Pandu Roga is characterized by the paleness of the body which may be due to reduced blood flow and oxygen or by a decreased number of red blood cells. Anemia is an extremely common disease affecting up to one-third of the global population. In many cases, it is mild and asymptomatic and requires no management. The prevalence increases with age and is more common in women of reproductive age, pregnant women, and the elderly.

The pathophysiology of anemia varies greatly depending on the primary cause. For instance, in acute hemorrhagic anemia, it is the restoration of blood volume with intracellular and extracellular fluid that dilutes the remaining red blood cells (RBCs), which results in anemia. A proportionate reduction in both plasma and red cells results in falsely normal hemoglobin and hematocrit. RBC are produced in the bone marrow and released into circulation. Approximately 1% of RBC are removed from circulation per day. Imbalance in production to removal or destruction of RBC leads to

anemia. The main mechanisms involved in anemia include increased RBC destruction and defective/ deficient erythropoiesis. Except for the anemia secondary to acute blood loss, anemia develops gradually and is asymptomatic until severe. Most anemias are picked up incidentally when blood counts are obtained for some other reason or as part of a screening work-up.

The main function of the red blood cell is the delivery of oxygen to the tissues throughout the body in sufficient quantity to support their normal functions. The hemoglobin content of red blood cells must be capable of oxygen loading and unloading, and cardiopulmonary function must be adequate. Adaptation to a reduction in hemoglobin and, hence, in the delivery of oxygen occurs in the red blood cells and the cardiopulmonary system. Within the red blood cells, there is an increase in 2,3-diphosphoglycerate, a normal product of glucose metabolism in the cell. When bound to the hemoglobin molecule, this substance decreases its affinity for oxygen, leading to increased release of oxygen at the capillary level. As the anemia increases in severity, this mechanism alone is insufficient, and changes in cardiac function occur. Cardiac output is increased by increases in stroke volume and heart rate. There is peripheral vasodilatation, widening of the pulse pressure, shortening of circulation time, and shunting of blood from less vital to more vital structures. A normal heart can tolerate the additional work that these adaptations require. As the anemia worsens, the compensatory mechanisms become inadequate, and the patient experiences fatigue, palpitations, and shortness of breath with exertion or febrile illness. By the time hemoglobin levels decrease to 7 to 8 g/dL, symptoms can occur at rest or with minimal activity. At a level of 5 g/dL, activity is limited, and additional nonspecific symptoms can occur, such as low-grade fever, headaches, insomnia, loss of appetite, nausea, diarrhea, constipation, menstrual irregularities, and polyuria. The patient may complain of "hearing her heart beat in her ears." In extreme anemia, high-output cardiac failure occurs even in young individuals with normal hearts. In the elderly, who are more likely to have coronary artery disease and some reduction in cardiac function, significant symptoms of heart failure can occur with much lesser degrees of anemia.

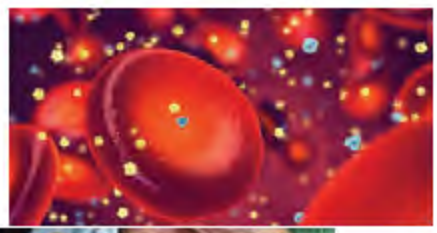
Ingredients and Medicinal Uses of Haemogrit Vital:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extracts of:				
Amla (Fr.)	*Phyllanthus emblica*	Amlapittanashak, Balya, Rasayan	• Alleviates hyperacidity • Strengthening • Rejuvenating	100 mg
Bhringraj (Wl.Pt.)	*Eclipta alba*	Pachak, Rasayan, Twakdosh Har	• Improves digestion • Rejuvenating • Alleviates diseases of skin	100 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Giloy (St.)	*Tinospora cordifolia*	Rasayan, Twakrog Har	• Rejuvenating • Alleviates diseases of skin	100 mg
Palak (Lf.)	*Spinacia oleracea*	Pachak, Dahashamak	• Improves digestion • Alleviates burning sensation	50 mg
Carrot (Rt.)	*Daucus carota*	Balya, Poshak	• Strengthening • Nourishing	1.5 mg
Sesbania (Wl. Pt.)	*Sesbania grandiflora*	Jwarnashak	• Alleviates fever	3 mg
Rosehip (Th.)	*Rosa centifolia*	Pachak, Balya, Tridosh Har	• Improves digestion • Strengthening • Pacifies three doshas	50mg
Fine Powder of:				
Palak (Lf.)	*Spinacia oleracea*	Pachak, Dahashamak	• Improves digestion • Alleviates burning sensation	6 mg
Abhrak Bhasma	Classical Preparation	Rasayan, Twakrog Nashak	• Rejuvenating, • Alleviates diseases of skin	50 mg
Mandoor Bhasma	Classical Preparation	Yakritpliharog Nashak, Rakta varadhak	• Alleviates diseases of liver and spleen • Improves quality and quantity of blood	50 mg
Yashad Bhasma	Classical Preparation	Deepan pachan	• Improves digestion	50 mg

Haemogrit Vital is Useful in:

- **Blood Disorders**
- **Anemia**
- **Reduced WBC and RBC counts**



Haemogrit Vital: Description in Classical Texts:

Haemogrit Vital is an Ayurvedic proprietary medicine prepared by using Ayurvedic medicines that are effective in blood disorders. Major components like Amla comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, sour, astringent in taste and cold potency. It has heavy property and sweet vipaka. This drug pacifies vata, pitta & kapha doshas. It is good for management of malabsorption, abdominal diseases, vomiting, and diseases of liver & spleen.

Bhringraj has pungent and bitter tastes with qualities of dryness and sharpness; hot potency and katu vipaka. It pacifies kapha and vata doshas. Giloy extract is pungent, bitter, astringent, in taste. Physical property is lightness. It's vipaka is madhur and this drug is hot in potency. Pacifies vata, pitta, kapha doshas; and helps in alleviating skin diseases, headache, edema, hernia, flatulence, rheumatism, anemia, jaundice, fever.

Palak is pungent and sweet in taste with cold potency and heavy property. It has a laxative action as well and increases vata dosha. It is useful to treat digestion related issues. Gajar has sweet and bitter tastes with qualities of lightness and sharpness; hot potency and madhura vipaka. It pacifies all three doshas. Sesbania/Agasta has bitter taste with qualities of lightness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas. Rosehip has pungent, bitter, astringent and sweet tastes with qualities of lightness and unctuousness; cold potency and madhura vipaka. It pacifies all three doshas.

Abhrak Bhasma can cure indigestion, kapha roga, breathing difficulties, fever, rakta pitta, cough, diabetes, anemia, and can be given with honey, ghee, Triphala kwath, Guduchi svarasa, Ardraka svarasa. Mandoor bhasma is prepared by proper incineration of mandoor-Rust of iron. Yashad Bhasma has astringent taste with cold potency and alleviates kapha and pitta doshas. It is useful in anemia.

Scientific Evidence of Haemogrit Vital:

Haemogrit Vital tablet was characterized by using different techniques. HPTLC analysis of Haemogrit Vital tablet showed 5 spots at 254 nm wavelength with mobile phase as Ethyl acetate: toluene: formic acid (5: 5: 1). At 366 nm wavelength, Haemogrit Vital tablet analysis indicated 6 fluorescent spots by using the same mobile phase. So HPTLC fingerprint of Haemogrit Vital tablet showed the bands of phytochemicals in both under UV 254 nm as well as UV 366 nm. This fingerprint is specific for Haemogrit Vital tablet under same chromatographic conditions, as shown in Fig. 1.

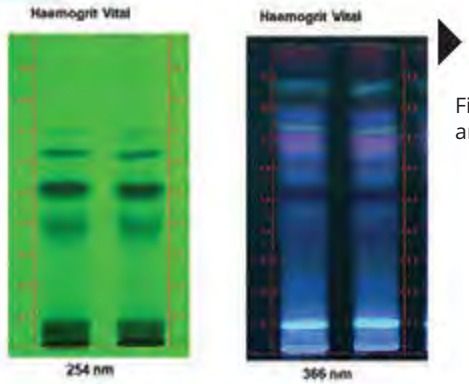


Figure 1: HPTLC fingerprinting of Haemogrit Vital tablet, at 254 nm and 366 nm wavelength.

Haemogrit Vital tablet was analysed with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector by using two different methods. In First method, During the analysis of Haemogrit Vital tablet, the different compounds were observed at 270 nm wavelength mainly gallic acid at 13.87 minutes, methyl gallate at 25.73 minutes, and colilagin at 33.45 minutes; at 240 nm wavelength, ascorbic acid at 6.11 minutes and at 280nm wavelength, folic acid at 30.94 minutes. In the chromatograms, the blue line shows the mix standards and green line indicates the test sample, as shown in Fig. 2. In the second method analysis, at 450 nm wavelength the compound was obtained mainly β-carotene at 26.682 minutes. In the chromatograms, the red line shows the standard and blue line indicates the test sample, as shown in Fig. 3.

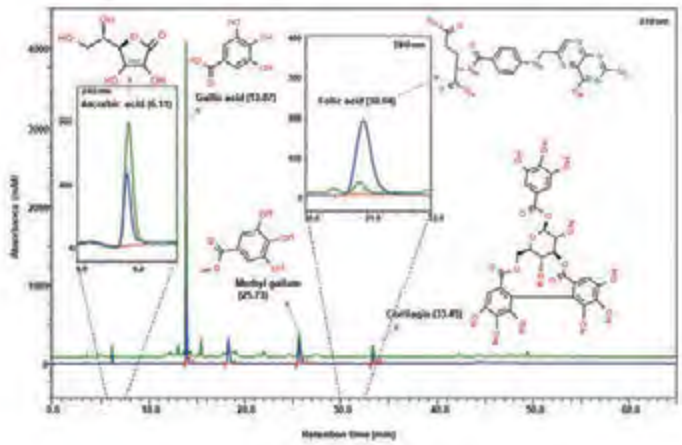


Fig. 2. Analysis of the Haemogrit Vital tablet by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Haemogrit Vital tablet, the compounds were found at 270 nm wavelength mainly gallic acid (13.87 minutes), methyl gallate (25.73 minutes), and colilagin (33.45 minutes); at 240 nm wavelength ascorbic acid (6.11 minutes) and at 270nm wavelength folic acid (30.94 minutes). In the chromatograms, the blue line shows the mix standards and green line indicates the test sample.

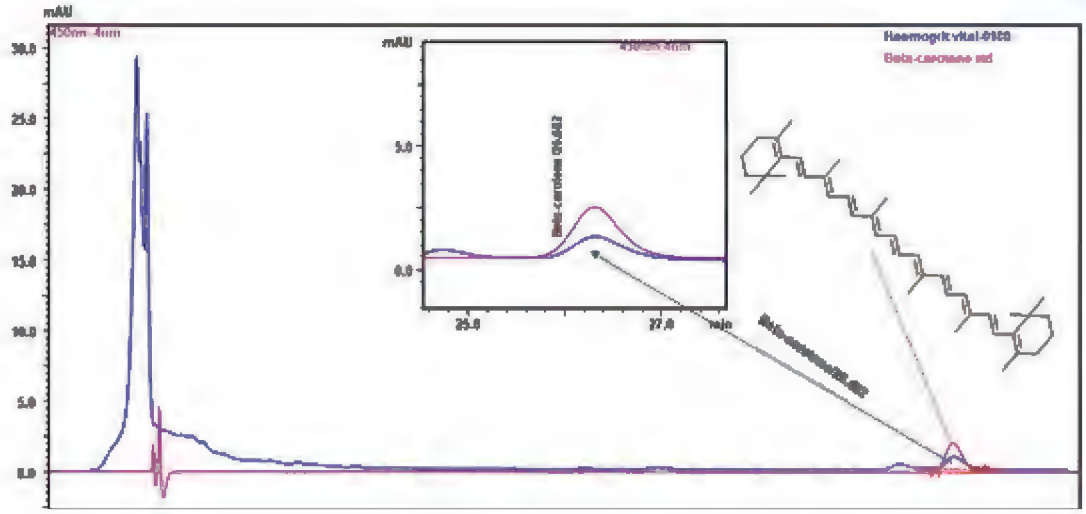


Fig. 3. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Haemogrit Vital tablet. In Haemogrit Vital tablet, the compound was found mainly β-carotene (26.682 minutes) at 450 nm wavelength. In the chromatograms, the red line shows the standard and blue line indicates the test sample.

Dose and Method of Use of Haemogrit Vital:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

PLATOGRIT प्लेटोग्रिट

Introduction to Thrombocytopenia

Immune Thrombocytopenia (ITP) is a clinical problem defined as a platelet count less than 150×109 /L (150,000/μL) although many feel that a cut off value of 100×109 /L (100,000/μL) is more appropriate to identify thrombocytopenia clinically. It occurs in both genders of all ages population, with an annual incidence rate of between 16 and 27 new cases per million. The prevalence ranges from 4.5 to 10.5 per 100,000 in adults and 4.6 per 100,000 in children. Immune Thrombocytopenia may be a primary condition or it may be caused by other diseases. Main causes of Immune Thrombocytopenia are ineffective production of platelets by bone marrow, accelerated destruction of platelets and platelet splenic sequestration.Physical examination includes examining the skin and other sites of bleeding and examination of liver, spleen, and lymph nodes. Only 5% of Immune Thrombocytopenia patients must be observed with serious bleeding. Irrespective of bleeding problems, patients with Immune Thrombocytopenia often report fatigue and impaired health-related quality of life. Clinical valuation of patients with isolated immune thrombocytopenia includes obtaining a Complete Blood Count (CBC), peripheral blood smear, Human Immunodeficiency Virus (HIV), and Hepatitis C Virus (HCV) tests. while the pathophysiology of immune thrombocytopenia is incompletely understood, the key event involves the production of antiplatelet autoantibodies.

There are two pathophysiologies of immune thrombocytopenia classified as decreased platelet production due to bone marrow failure, presenting in aplastic anemia. Exposure to certain drugs (valproic acid, daptomycin, chemotherapeutic agents) may cause bone marrow suppression. Chronic alcohol abuse, inherited thrombocytopenia, viral infections, systemic conditions like nutrient deficiencies (folate, vitamin B12), sepsis, and myelodysplastic syndrome can cause impaired platelet production in the bone marrow.

Increased platelet destruction occurs through autoantibodies targeting platelets for destruction by macrophages in the spleen, liver, or both, through the activation of Fcy receptors. This process is controlled by Spleen tyrosine kinase (Syk). Autoantibodies may also destroy platelets through other mechanisms and inhibit platelet production by megakaryocytes.

At present, the treatments for Immune Thrombocytopenia include the application of glucocorticoids, platelet transfusion, gamma globulin, the use of immunosuppressants, and splenectomy. However, about 30% of the patients show no obvious treatment effect. Long-term use can cause glucocorticoid tolerance or dependence in some patients,

as well as side effects such as elevated blood pressure, blood sugar, immune disorders, and femoral head necrosis.

According to Ayurvedic literature on Raktapitta, when pitta vitiated rakta increases in amount due to the usna guna of pitta, it starts flowing out of the body through different parts—upward, downward, or both, or through skin pores. Based on the direction of blood flow, Raktapitta is classified into three types, which are as follows:

(a) Urdhvaga- the causative attributes are snigdha and ushna guna which vitiate the combination of kapha and pitta and oozing of contaminated blood occurs from upward passages or orifices i.e., from Mukha (mouth), Karna (ears), Akshi (eyes) and Nasa (Nostrils).

(b) Adhogathe attributes are ruksha and ushna guna which causes vitiation of vata and pitta and oozing of contaminated blood occurs from downward passages or orifices i.e., from Guda, Yoni and Mutramarga.

(c) Tiryaka- when all the dosas are vitiated and are circulating in the blood stream, the manifestation is subcutaneous.

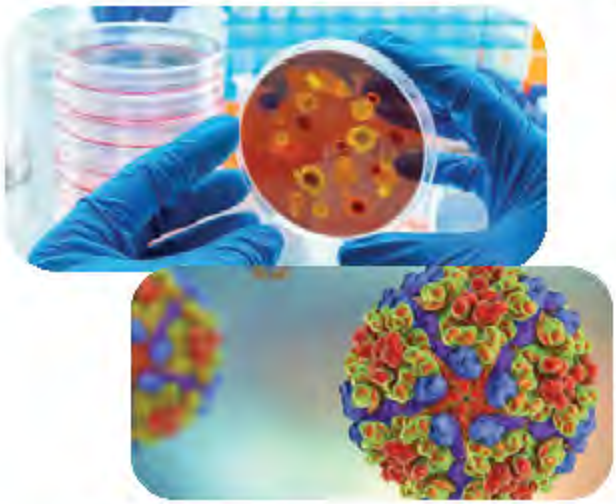
Immune Thrombocytopenia can be correlated with Tiryaga Raktapitta as in both vitiation of rakta occurs and manifestation is subcutaneous. The World Health Organization estimates that approximately 80% of the world's population use traditional medicine for their primary health care needs and most of this therapy involves the use of plant extracts or the active components from plants. Herbal medicines have been traditionally used in the management of Immune Thrombocytopenia and can play a role particularly in platelet function, and have the potential of altering platelet function tests, as well as some coagulation parameters.

Ingredients and Medicinal Uses of Platogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Giloy (St.)	*Tinosporia cordifolia*	Raktashodhaka, Rasayana	• Blood cleansing • Rejuvenating	62.5 mg
Aloe vera (Lf. Pp.)	*Aloe barbadensis*	Rasayana, Shonitasthapana	• Rejuvenating • Styptic	62.5 mg
Papaya (Lf., Un. Rp. Fr.)	*Carica papaya*	Vishaghna, Hridya	• Anti-toxic • Cardiotonic	250 mg
Anardana (Sd.)	*Punica granatum*	Raktashodhaka	• Blood cleansing	62.5 mg
Palak (Lf.)	*Spinacia oleracea*	Raktdosh Har, Yakritshoth Har	• Alleviates blood disorders • Alleviates inflammation in the liver	62.5 mg

Platogrit is Useful in:

- **Dengue**
- **Chikungunya**
- **Thrombocytopenia**



Platogrit: Description in Classical Texts:

Platogrit is an Ayurvedic Proprietary medicine containing five important ingredients with papaya being the main one. It nourishes and purifies blood and is good in conditions like Chikungunya and Dengue. Giloy has pungent, bitter and astringent in taste. Physical property is lightness. The vipaka is madhur and this drug is hot in potency. It pacifies vata, pitta, and kapha doshas and can cure indigestion, thirst, polyuria, anemia, skin diseases, and heart ailments.

Bhava prakasha has included Aloe vera in Guduchyadi varga. Aloe vera, called Kumari in Ayurveda, has purgative action as well. This drug has bitter and sweet tastes; with the qualities of heaviness and strengthening; cold potency and madhura vipaka. It pacifies vata and kapha doshas.

Papaya has pungent and bitter taste with qualities of lightness, dryness and sharpness. The potency is hot and vipaka is katu. It pacifies kapha vata doshas. Anardana is sweet taste with astringent aftertaste and qualities of lightness and unctuousness; hot potency and madhura vipaka. It pacifies all three doshas.

Palak is pungent and sweet in taste with cold potency and heavy property. It has a laxative action as well and increases vata dosha. It is useful to treat digestion related issues.

Scientific Evidence of Platogrit:

Platogrit was studied by High Performance Liquid Chromatography (HPLC) to identify and quantify the phytochemicals. Study confirms that Platogrit contains gallic acid, 4-hydroxybenzoic acid, and ellagic acid as major phytoconstituents. HPLC chromatogram

of reference standard and Platogrit are shown in fig. 1. Chromatogram in blue represents the reference standard and reddish orange represents Platogrit tablet. The retention time of gallic acid (10.14 minutes), 4-hydroxybenzoic acid (24.27 minutes) and ellagic acid (46.13 minutes) confirms the presence of these compounds in Platogrit tablet.

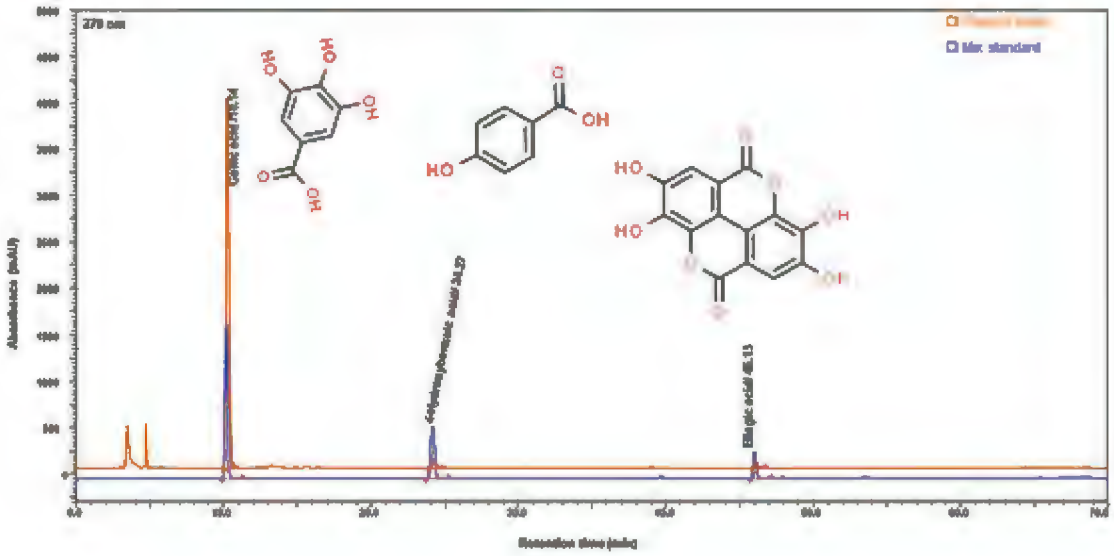


Fig. 1: High Performance Liquid Chromatographic (HPLC) study at 270 nm wavelength confirms the presence of gallic acid, 4-hydroxybenzoic acid, and ellagic acid as major phytoconstituents in Platogrit tablet.

Dose and Method of Use of Platogrit:

Dose and Frequency	1-2 Tablets, twice a day
Adjuvant	Water
Time of Administration	Empty Stomach
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

PLATOGRIT MILK GRANULES प्लेटोग्रिट मिल्क ग्रेनुअल्स

Introduction to Indigestion, Fever and Anorexia:

Different medical diseases that have an impact on many areas of the human body include indigestion, aphrodisiac, anorexia, and antipyretic. Indigestion is characterised by discomfort or soreness in the upper belly, which is frequently brought on by challenges with food digestion. Aphrodisiacs are substances or behaviours that are thought to increase sexual arousal or effectiveness. Complex eating disorder anorexia is characterised by a distorted body image and a severe fear of gaining weight. Antipyretic refers to drugs or therapies that lower fever.

For the purpose of increasing general well-being and treating particular health concerns, it is crucial to comprehend the prevalence and management of various disorders. Indigestion is a common condition that affects people of all ages. The prevalence of indigestion varies, but it is estimated that approximately 20% of the population experiences indigestion at some point in their lives. The management of indigestion focuses on identifying and addressing the underlying causes. Lifestyle modifications, such as eating smaller meals, avoiding trigger foods, managing stress, and maintaining a healthy weight, are often recommended. Over-the-counter antacids and acid-suppressing medications may provide relief for mild to moderate cases. In more severe or persistent cases, further medical evaluation and prescription medications may be necessary.

Anorexia nervosa is an eating disorder characterized by severe restrictions in food intake, an intense fear of gaining weight, and a distorted body image. It predominantly affects young women but can also occur in men and individuals of various ages. The prevalence of anorexia nervosa is estimated to be around 1% in the general population. Effective management of anorexia nervosa requires a multidisciplinary approach involving medical, psychological, and nutritional interventions. Treatment may include psychotherapy, nutritional counseling, medical monitoring, and sometimes hospitalization in severe cases. Early detection and intervention are crucial in improving outcomes and promoting long-term recovery. Antipyretics are medications or treatments used to reduce fever, which is a common symptom of various underlying conditions, such as infections or inflammatory processes. The prevalence of fever varies depending on the specific cause and population. Antipyretic medications, such as acetaminophen (paracetamol) and nonsteroidal anti-inflammatory drugs (NSAIDs)

like ibuprofen, are commonly used to manage fever. These medications work by reducing fever and alleviating associated symptoms. Proper dosage and adherence to instructions are important to ensure safe and effective use of antipyretics. However, it is important to note that fever is often a natural response of the body's immune system and can be beneficial in fighting infections. Therefore, antipyretic medications may not always be necessary or recommended for every instance of fever. Indigestion, aphrodisiac, anorexia, and antipyretic are separate medical diseases that may have various effects on people. These conditions can be more common or less common, and different situations require different care strategies based on the needs of the individual. In order to effectively manage chronic illnesses and promote general well-being, professional counselling, lifestyle changes, evidence-based therapies, and proper medical examination are crucial.

Ingredients and Medicinal Uses of Platogrit Milk granules:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 10 g contains
Fine Powders of:				
Goat milk	-------	Vrishya, Jwarnashak, Kasahar	• Aphrodisiac • Alleviates fever • Alleviates cough	3.33 g
Dry Extracts of:				
Papaya (Lf.)	*Carica papaya*	Pachak	• Improves digestion	3.33 g
Anardana (Sd.)	*Punica granatum*	Rochak	• Enhances taste perception	1.66 g

Platogrit Milk granules is Useful in:

- **Indigestion**
- **Fever**
- **Anorexia**
- **Reduced Platelet Count**

Platogrit Milk granules: Description in Classical Texts:

Platogrit milk granules is prepared by incorporating extracts of papaya and anardana with goat's milk. Papaya has pungent and bitter taste with qualities of lightness, dryness and sharpness. The potency is hot and vipaka is katu. It pacifies kapha vata doshas.

Anardana is sweet taste with astringent aftertaste and qualities of lightness and unctuousness; hot potency and madhura vipaka. It pacifies all three doshas. Goat's milk is astringent and sweet in taste with quality of lightness and cold potency. It is useful in bleeding diseases, emaciation and cough. According to Sushrut Samhita, it is helpful in managing all diseases.

Scientific Evidence of Platogrit Milk granules:

High Perfromance Thin Layer Chromatography (HPTLC) analysis of Platogrit milk granules showed 7 spots at 254 nm wavelength with mobile phase as toluene: ethyl acetate: formic acid (6: 3: 1::V/V/V). At 366 nm wavelength, Platogrit milk granules analysis indicated 6 fluorescent spots with the same mobile phase. So HPTLC fingerprint of Platogrit milk granules showed the bands of phytochemicals in both under UV 254 nm and UV 366 nm. This fingerprint is specific for Platogrit milk granules under same chromatographic conditions, as shown in Fig. 1.

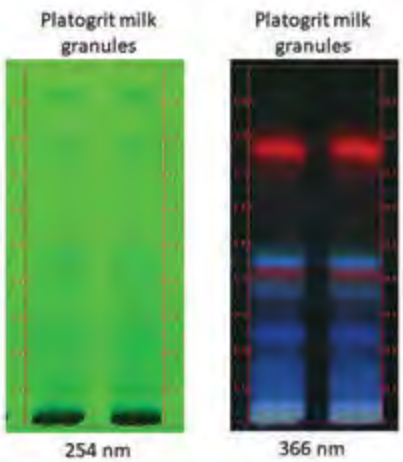


Figure 1: High Perfromance Thin Layer Chromatography (HPTLC) fingerprinting of Platogrit milk granules. Mobile Phase: Toluene: ethyl acetate: formic acid (6: 3: 1::V/V/V).

Platogrit milk granules was analysed by using Gas chromatography–mass spectrometry (GC–MS) technique. In Platogrit milk granules, the different compounds were obtained namely caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, and linolenic acid, as shown in Fig. 2.

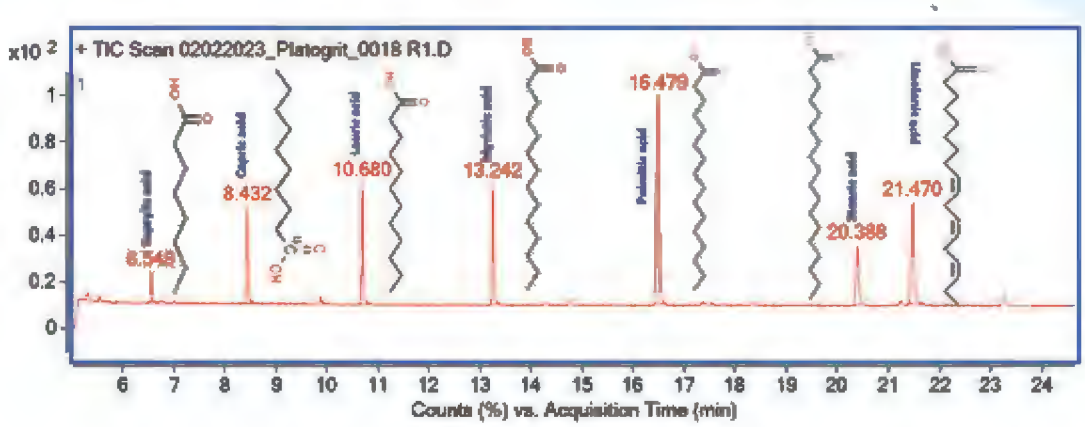


Fig. 2. The GC–MS chromatogram of Platogrit milk granules. The chromatogram showed the presence of different compounds caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, and linolenic acid in Platogrit milk granules.

Dose and Method of Use of Platogrit Milk granules:

Dose and Frequency	1 sachet (5g), twice a day
Adjuvant	1 glass (200 ml) warm water
Or as directed by the physician.	

Tablet

FEVOGRIT

फीवोग्रिट

Introduction to Fever:

Fever, also referred to as pyrexia, is defined as having a temperature above the normal range due to an increase in the body's temperature set point. There is not a single agreed-upon upper limit for normal temperature with sources using values between 37.2 and 38.3 °C (99.0 and 100.9 °F) in humans. The increase in set point triggers increased muscle contractions and causes a feeling of cold or chills. This results in greater heat production and efforts to conserve heat. When the set point temperature returns to normal, a person feels hot, becomes flushed, and may begin to sweat. Rarely a fever may trigger a febrile seizure, with this being more common in young children. Fevers do not typically go higher than 41 to 42 °C (106 to 108 °F).

A fever can be caused by many medical conditions ranging from non-serious to life-threatening. This includes viral, bacterial, and parasitic infections—such as influenza, the common cold, meningitis, urinary tract infections, appendicitis, Lassa, COVID-19, and malaria. Non-infectious causes include vasculitis, deep vein thrombosis, connective tissue disease, side effects of medication or vaccination, and cancer. It differs from hyperthermia, in that hyperthermia is an increase in body temperature over the temperature set point, due to either too much heat production or not enough heat loss.

Treatment to reduce fever is generally not required. Treatment of associated pain and inflammation, however, may be useful and help a person rest. Medications such as ibuprofen or paracetamol (acetaminophen) may help with this as well as lower temperature. Children younger than three months require medical attention, as might people with serious medical problems such as a compromised immune system or people with other symptoms. Hyperthermia requires treatment.

Fever is one of the most common medical signs. It is part of about 30% of healthcare visits by children and occurs in up to 75% of adults who are seriously sick. While fever evolved as a defense mechanism, treating a fever does not appear to improve or worsen outcomes. Fever is often viewed with greater concern by parents and healthcare professionals than is usually deserved, a phenomenon known as fever phobia.

Fever does not necessarily need to be treated, and most people with a fever recover without specific medical attention. Although it is unpleasant, fever rarely rises to a dangerous level even if untreated. Damage to the brain generally does not occur until temperatures reach 42.0 °C (107.6 °F), and it is rare for an untreated fever to exceed 40.6 °C (105.1 °F). Treating fever in people with sepsis does not

affect outcomes. Small trials have shown no benefit of treating fevers of 38.5 °C (101.3 °F) or higher of critically ill patients in ICUs, and one trial was terminated early because patients receiving aggressive fever treatment were dying more often.

Fever is one of the most common medical signs. It is part of about 30% of healthcare visits by children, and occurs in up to 75% of adults who are seriously sick. About 5% of people who go to an emergency room have a fever.

Ingredients and Medicinal Uses of Fevogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Chirayata (Wl. Pt.)	*Swertia chirayita*	Jwarnashak, Vishamjwar Har	• Alleviates fever • Alleviates pyrexia of unknown origin	50 mg
Giloy (St.)	*Tinospora cordifolia*	Jwar Har, Rasayan, Balya	• Alleviates fever • Rejuvenating • Strengthening	250 mg
Karanj (Sd.)	*Millettia pinnata*	Jwar Har, Balya	• Alleviates fever • Strengthening	100 mg
Kutki (Rt.)	*Picrorhiza kurrooa*	Jwar Har	• Alleviates fever	50 mg
Tulsi (Lf., St.)	*Ocimum sanctum*	Vishamjwar Har	• Alleviates pyrexia of unknown origin	25 mg

Fevogrit is Useful in:

- **Fever and General Sickness**
- **Seasonal Flu**
- **Common Cold and Cough**

Fevogrit: Description in Classical Texts:

Fevogrit an Ayurvedic proprietary medicine is combination of five herbs that are having potential antipyretic effects in Ayurveda. Chirayata has bitter taste with qualities of lightness and dryness; cold potency and katu vipaka. It pacifies kapha and pitta doshas.

Giloy has pungent, bitter and astringent in taste. Physical property is lightness. The vipaka is madhur and this drug is hot in potency. It pacifies vata, pitta, and kapha doshas and can cure indigestion, thirst, polyuria, anemia, skin diseases, and heart ailments.

Karanj is pungent in taste and physical property is dryness and sharpness. It has hot potency and pacifies kapha dosha. It can cure skin diseases, vaginal diseases, flatulence, abdominal tumor, ulcer etc.

Kutki is pungent in taste; with properties of lightness, dryness and sharpness; having madhur vipaka and cold potency. It pacifies pitta, kapha doshas and helps in management of indigestion, thirst, polyuria, blood diseases and skin diseases.

Tulsi is pungent, bitter in taste, and hot potency. It has dry property and pacifies vata and kapha doshas although also aggravates pitta dosha. Useful in skin diseases, dysuria, burning sensation, disease caused by vitiation of blood.

Scientific Evidence of Fevogrit:

Fevogrit tablet was analysed with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In Fevogrit tablet, the different compounds were obtained at 270 nm wavelength mainly cordifolioside A at 21.80 minutes, vanillic acid at 23.07 minutes, magnoflorine at 25.07 minutes, picroside II at 34.79 minutes, picroside I at 39.37 minutes and cinnamic acid at 44.85 minutes, as shown in Fig.1. In the chromatograms, the blue line shows the standard and pink line represents the test sample.

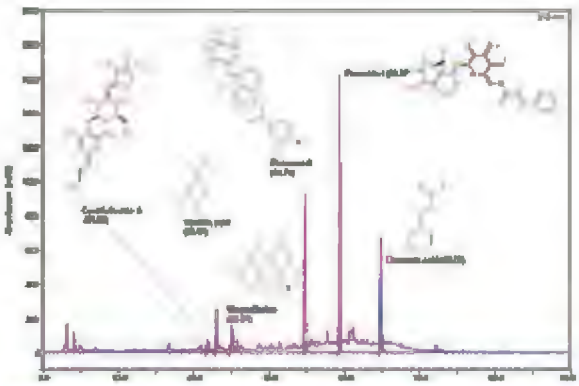


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Fevogrit tablet. In Fevogrit, the compounds were observed mainly cordifolioside A (21.80 minutes), vanillic acid (23.07 minutes), magnoflorine (25.07 minutes), picroside II (34.79 minutes), picroside I (39.37 minutes) and cinnamic acid (44.85 minutes) at 270 nm wavelength. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of Fevogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

CORONIL कोरोनिल

Introduction to COVID-19:

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus.

Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age.

The best way to prevent and slow down transmission is to be well informed about the disease and how the virus spreads. Protect yourself and others from infection by staying at least 1 metre apart from others, wearing a properly fitted mask, and washing your hands or using an alcohol-based sanitizer. Get vaccinated when it's your turn and follow local guidance.

The virus can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. These particles range from larger respiratory droplets to smaller aerosols. It is important to practice respiratory etiquette, for example by coughing into a flexed elbow, and to stay home and self-isolate until you recover if you feel unwell.

COVID-19 affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization.

Most common symptoms:
- Fever
- Cough
- Tiredness
- Loss of taste or smell.

Less common symptoms:
- Sore throat
- Headache
- Aches and pains
- Diarrhoea
- A rash on skin, or discolouration of fingers or toes
- Red or irritated eyes.

Serious symptoms:
- Difficulty breathing or shortness of breath
- Loss of speech or mobility, or confusion
- Chest pain.

Seek immediate medical attention if you have serious symptoms. Always call before visiting your doctor or health facility.
People with mild symptoms who are otherwise healthy should manage their symptoms at home.

On average it takes 5–6 days from when someone is infected with the virus for symptoms to show, however it can take up to 14 days.

To prevent infection and to slow transmission of COVID-19, do the following:

- Get vaccinated when a vaccine is available to you.
- Stay at least 1 metre apart from others, even if they don't appear to be sick.
- Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings.
- Choose open, well-ventilated spaces over closed ones. Open a window if indoors.
- Wash your hands regularly with soap and water or clean them with alcohol-based hand rub.
- Cover your mouth and nose when coughing or sneezing.
- If you feel unwell, stay home and self-isolate until you recover.
- closed ones. Open a window if indoors.
- Wash your hands regularly with soap and water or clean them with alcohol-based hand rub.
- Cover your mouth and nose when coughing or sneezing.
- If you feel unwell, stay home and self-isolate until you recover.

Ingredients and Medicinal Uses of Coronil:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Giloy (St.)	*Tinospora cordifolia*	Rasayan, Tridoshhar, Sarv Jwar Har	• Immune booster • Pacifies all three doshas • Alleviates all fevers	300 mg
Aswagandha (Rt.)	*Withania somnifera*	Rasayan, Balya, Shoth Har	• Immune booster • Strengthening • Anti-inflammatory	250 mg
Tulsi (Lf.)	*Ocimum sanctum*	Kasa, Swasa,Pratishyaya Har, Vatakaphaj Jwar Hara	• Alleviates respiratory diseases • Alleviates fever due to vatakapha	50 mg

Coronil is Useful in:

- **COVID-19 (Supportive Care)**
- **Immunobooster**
- **Respiratory Tract Infections**
- **Viral Fevers**

Coronil: Description in Classical Texts:

This Ayurvedic proprietary medicine is an efficient combination of Ayurvedic herbs that promote immunity and has Jwarhar action. Giloy has pungent, bitter and astringent in taste. Physical property is lightness. The vipaka is madhur and this drug is hot in potency. It pacifies vata, pitta, and kapha doshas and can cure indigestion, thirst, polyuria, anemia, skin diseases, and heart ailments.

Bhava prakasha has explained about Ashwagandha in Guduchyadi varga. It has pungent, bitter and astringent tastes with the qualities of lightness and unctuousness. It is hot in potency and pocess katu vipaka. It pacifies kapha vata doshas and is Rejuvenating and Strengthening in action. It can cure Leucoderma, Eczema, Skin diseases and Tuberculosis.

Holy Basil/tulsi is pungent and bitter in taste with a hot potency, and has dryness as the main property. It pacifies vata and kapha doshas and aggravates pitta dosha. This herb is useful in skin diseases, dysuria, burning sensation, and diseases caused by vitiation of blood. It acts as a cardiac toner and appetizer.

Scientific Evidence of Coronil:

SARS-CoV-2 involves the host cell ACE-2 through its spike (S) protein receptor binding domain (RBD). It was found that natural phytochemical from *Withania sominfera* (Ashwagandha), withanone, docked very well in the binding interface of ACE2-RBD complex and was obtained to move slightly towards the interface center through simulation. It was also shown that the phytochemicals of *Tinospora cordifolia* (Giloy) in our in-silico models among all, one of the phytocompound of Giloy compound, tinocordiside, docks very well within the ACE-2-RBD complex, akin to withanone. We observed that a few phytocompounds present in Ocimum sanctum (Tulsi) may hit the catalytic cleft of SARS-CoV-2 RNA dependent RNA polymerase (RdRP). Scutellarein is one of them as it binds RDRP with a docking score of -8.3 kcal/mol, and may perturb the Motif B, which is used by the coronavirus for its RNA polymerization. This suggests that scutellarin might have inhibitory effect on SARS-CoV-2 RdRP, as shown in Fig. 1.

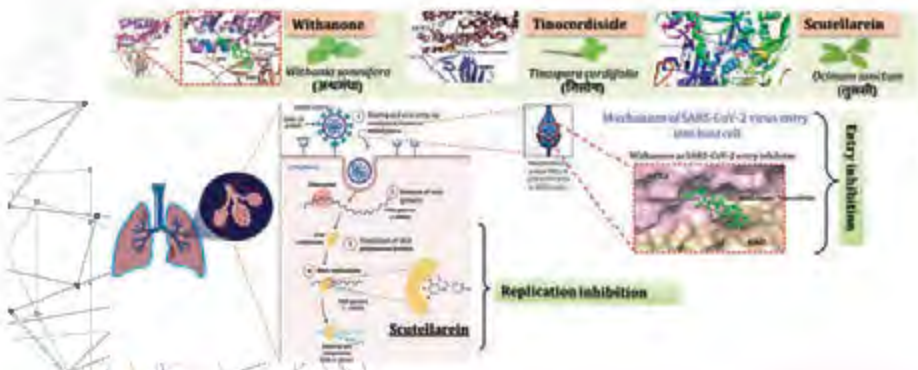


Fig. 1. Computational study of Ashwagandha, Giloy and Tulsi

During the analysis of coronil tablet by UHPLC QToF, we observed 41 compounds (some were found in both positive as well as negative mode) which confirmed the existence of Ashwagandha, Giloy and Tulsi in the medicinal formulation. We also performed the High Performance Thin Layer Chromatographic (HPTLC) and High Performance Liquid Chromatographic (HPLC) method was developed for identification, quantification and validation of marker compounds in Coronil tablet which were mainly withaferin A, rosmarinic acid, ursolic acid, withanoside IV, magnoflorine, and palmatine, as shown in Fig. 2 and Fig. 3.

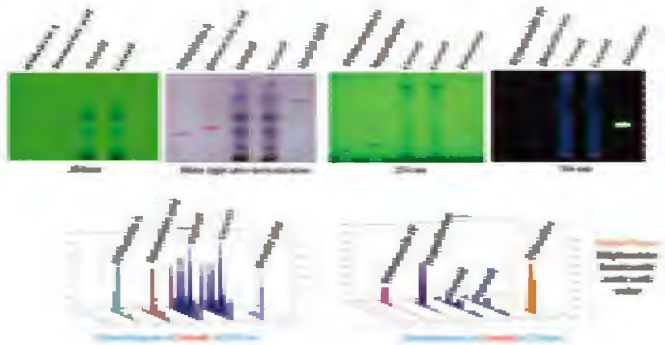


Fig. 2: High Performance Thin Layer Chromatographic (HPTLC) analysis of Coronil tablet

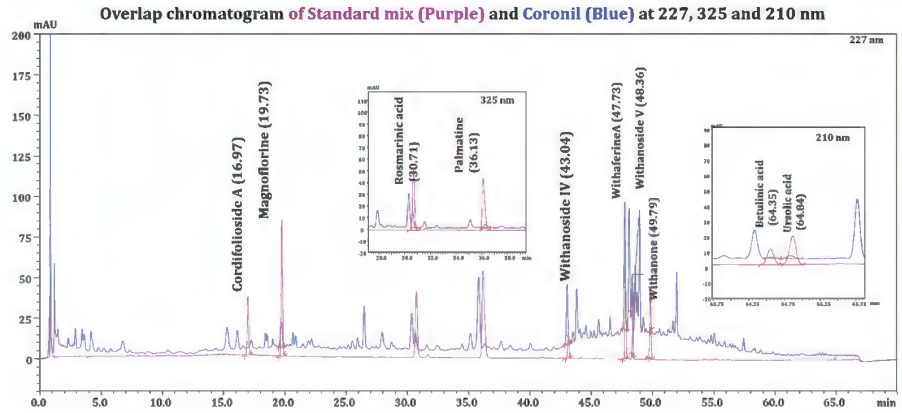


Fig. 3. High Performance Liquid Chromatographic (HPLC) analysis of Coronil tablet.

In order to validate computational observation showing that withanone from W. somnifera can inhibit interaction between human ACE-2 receptor and SARS-CoV-2 spike (S) protein. We used the purified RBD peptide attached to a substratum which allowed to interact with purified human ACE-2 protein in the presence and absence of withanone. The ACE-2 protein was conjugated to horse radish peroxidase (HRP) which acted on the substrate 3,3',5,5'-tetramethylbenzidine (TMB) to give a colorimetrically quantifiable solution. We noted that withanone, indeed, inhibited this protein-protein interaction crucial for SARS-CoV-2 infection, as shown in Fig. 4.

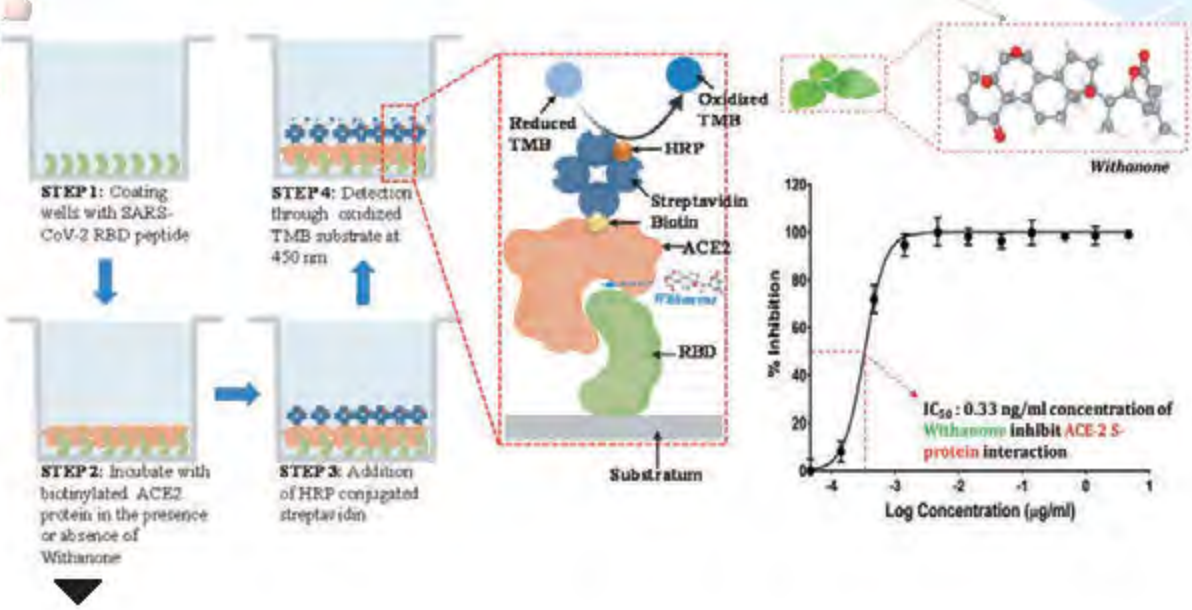


Fig. 4. Withanone effectively inhibits molecular interaction between virus (RBD) and host cell (ACE-2) in a dose- dependent manner

Same biochemical approach was used to confirm the inhibitory effects of Coronil tablet (CN) on interaction between human ACE-2 receptor and viral S protein. Here we used the different mutant varieties of SARS-CoV-2 S protein, namely, SWT, SD614G and SW436R. Interestingly, we observed that Coronil tablet (CN) efficiently inhibited ACE-2 interactions with all these mutant varieties of S protein, as shown in Fig. 5. So these medicinesare effective against S protein mutations as well.

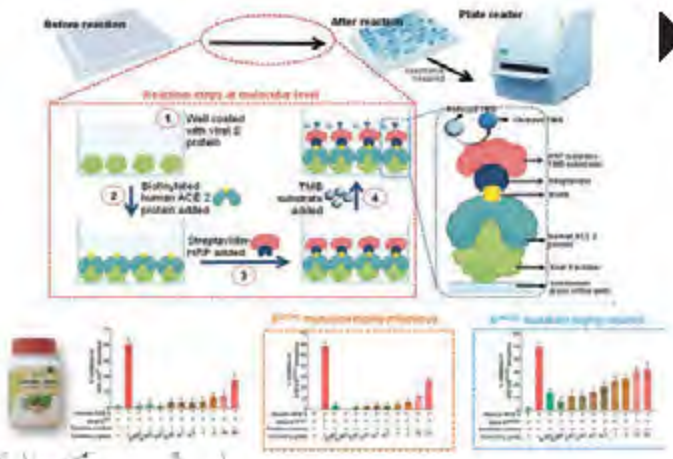


Fig. 5. Coronil tablet tablet (CN) inhibit viral S protein and host cell ACE-2 receptor interactions.

Pre-clinical animal models are needed in order to understand the disease progress and associated symptoms. In the SARS-CoV-2 infection, the use of higher primates like monkeys, or other animals like dogs and rodents, which are generally accepted preclinical models of drug discovery has a myriad of scientific and ethical concerns. Humanized zebrafish model was used to confirm the inhibitory effects of Coronil tablet in reducing the pathological features associated with the SARS-CoV-2 spike protein induction. Human lung epithelial cells (A549) were injected into the swim bladder and allowed to colonize for a period of 7 days. After that the recombinant spike protein of SARS-CoV-2 was injected at the site of A549 cells introduction and allowed to establish the disease phenotype. Once the disease phenotype was established, the fish were fed the reference drug Dexamethasone (0.08 µg/kg/day), and the test formulation Coronil tablet at 0.2X (12 µg/kg/day) and 1X (58 µg/kg/day) human relevant doses. In one set of experiments, the fish were dosed for 3 days and terminated on the 4th day, and in the other, the dosing was for 6 days at terminated on the 7th day, as shown in Fig. 6.

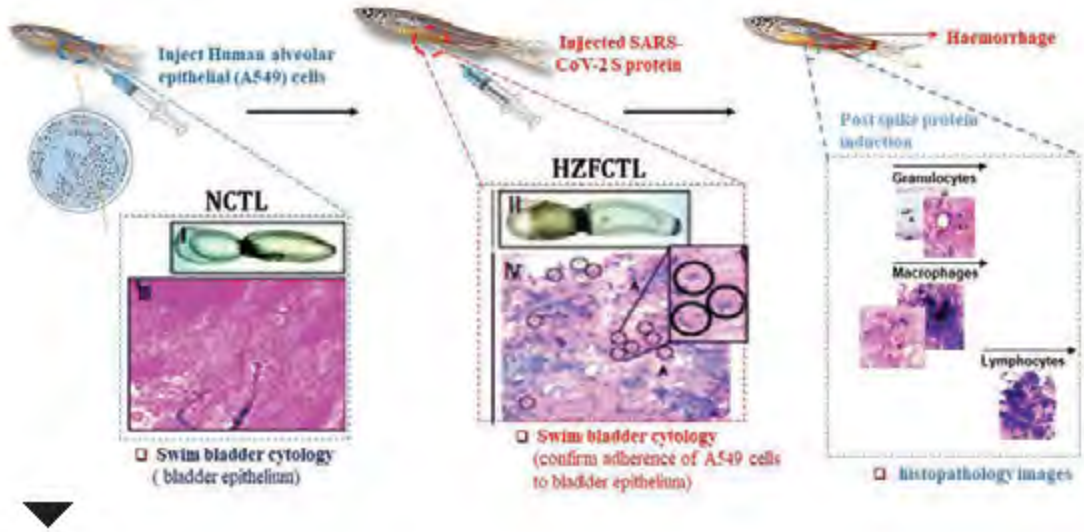


Fig. 6. In-vivo model of zebrafish for study of SARS-CoV-2

There was an increase in the infiltration of pro-inflammatory immune cells like the granulocytes and macrophages into the swim bladder as seen by cytological examination. When the expression levels of the different cytokines IL-6, IL-10, and TNF-α were assessed by semi-quantitative gene expression, the disease control fish showed a significant increase in the expression of the three cytokines. There was a highly significant reduction in IL-6 levels with both concentrations of Coronil tablet at the 7th day. The levels of both IL-10 and TNF-α were reduced at both the concentrations of Coronil tablet, but it was statistically significant at only 58 µg/kg, as shown in Fig. 7.

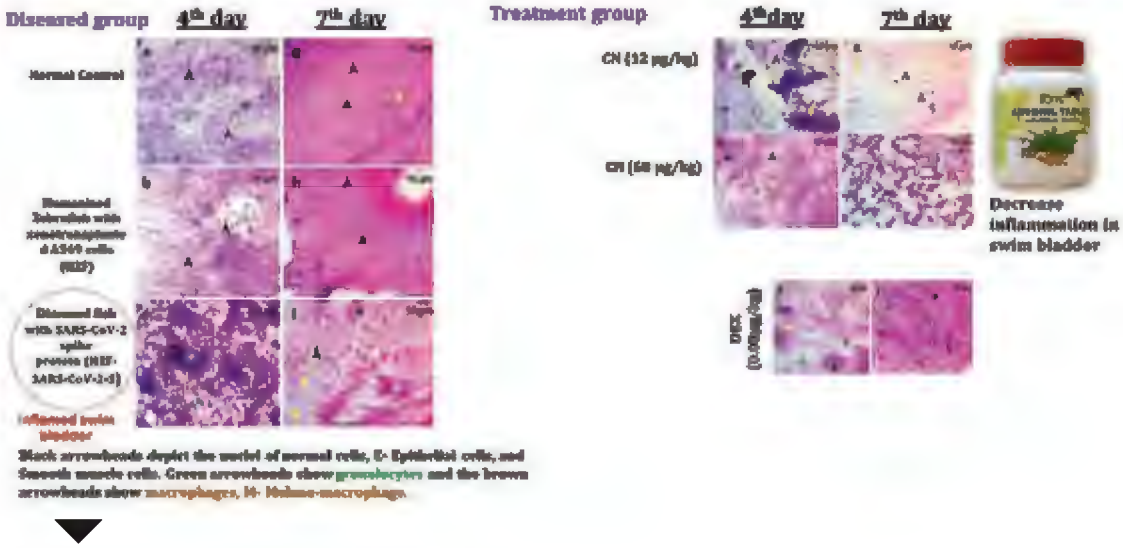


Fig. 7. Coronil tablet (CN) rescues from SARS-CoV-2 spike protein induced inflammation in swim bladder cytosmears.

Primary goal of clinical research is to minimize presumption and to seek universal truth. We broadly include the clinical trials, guidelines and standards followed during the testing of our new drug 'Coronil Tablet'. COVID-19, due to its nature of transmissibility and etiology of virus with unavailability of treatment; this pandemic has evolved as global threat. Many clinical trials are underway to find effective management against COVID-19. Patanjali Research Foundation has registered two trial on intervention studies on COVID19 patients on Ayurvedic regimen on Clinical Trials Registry-India (CTRI) which approves and ensures that the research is more complete, authenticated, and data is readily available publicly. Our study was conducted with the highest respect for the individual participants in accordance with the requirements of the clinical study protocol.

Dose and Method of Use of Coronil:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

Avaleha

TYPHOGRIT टायफोग्रिट

Introduction to Typhoid:

Typhoid fever is a life-threatening infection caused by the bacterium *Salmonella Typhi*. It is usually spread through contaminated food or water. Once *Salmonella Typhi* bacteria are ingested, they multiply and spread into the bloodstream. Urbanization and climate change have the potential to increase the global burden of typhoid. In addition, increasing resistance to antibiotic treatment is making it easier for typhoid to spread in communities that lack access to safe drinking water or adequate sanitation. *Salmonella Typhi* lives only in humans. Persons with typhoid fever carry the bacteria in their bloodstream and intestinal tract. Symptoms include prolonged high fever, fatigue, headache, nausea, abdominal pain, and constipation or diarrhoea. Some patients may have a rash. Severe cases may lead to serious complications or even death. Typhoid fever can be confirmed through blood testing. Improved living conditions and the introduction of antibiotics resulted in a drastic reduction of typhoid fever morbidity and mortality in industrialized countries. However, the disease continues to be a public health problem in many developing areas of the WHO African, Eastern Mediterranean, South-East Asia and Western Pacific Regions. As of 2019 estimates, there are 9 million cases of typhoid fever annually, resulting in about 110 000 deaths per year. Typhoid risk is higher in populations that lack access to safe water and adequate sanitation, and children are at highest risk, typhoid fever is common in places with poor sanitation and a lack of safe drinking water. Access to safe water and adequate sanitation, hygiene among food handlers and typhoid vaccination are all effective in preventing typhoid fever. Typhoid fever can be treated with antibiotics. Antimicrobial resistance is common with the likelihood of more complicated and expensive treatment options required in the most affected regions. Even when the symptoms go away, people may still be carrying typhoid bacteria, meaning they can spread it to others, through shedding of bacteria in their faeces.

It is important for people being treated for typhoid fever to do the following:

* Take prescribed antibiotics for as long as the doctor has prescribed.
* Wash their hands with soap and water after using the bathroom and avoid preparing or serving food for other people. This will lower the chance of passing the infection on to someone else.
* Have their doctor test to ensure that no Salmonella Typhi bacteria remain in their body.
* As per the report of WHO an estimated 9 million people get sick from typhoid and 110 000 people die from it every year.

* Symptoms include prolonged fever, fatigue, headache, nausea, abdominal pain, and constipation or diarrhoea. Some patients may have a rash. Severe cases may lead to serious complications or even death.

* Typhoid fever can be treated with antibiotics although increasing resistance to different types of antibiotics is making treatment more complicated.

* The typhoid conjugate vaccine is recommended for use in children from 6 months of age and in adults up to 45 years or 65 years (depending on the vaccine).

* Two typhoid conjugate vaccines have been prequalified by WHO since December 2017 and are being introduced into childhood immunization programmes in typhoid endemic countries.

Ingredients and Medicinal Uses of Typhogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 gm Avaleha contains
Khubkala (Sd.)	***Sisymbrium irio***	Jwaraghna, Swedajanana	• Alleviates fever • Induce perspiration	6.50 g
Anjeer (Fr.)	***Ficus carica***	Jwaraghna, Kaphanissarak	• Alleviates fever • Expectorant	65.00 g
Munakka (Fr.)	***Vitis vinifera***	Jwaraghna	• Alleviates fever	13.00 g
Giloy sat (St.)	***Tinospora cordifolia***	Jwaraghna	• Alleviates fever	0.16 g
Oil of:				
Ashwagandha (Sd.)	***Withania Somnifera***	Swasahara, Balya, Rasayana	• Alleviates asthma • Strengthening • Rejuvenating	0.16 g

Typhogrit is Useful in:

- **Typhoid Fever and Associated Symptoms**

Typhogrit: Description in Classical Texts:

Typhogrit is an Ayurvedic proprietary medicine, the ingredients used are herbs traditionally used by Ayurvedic physicians for fevers. Khubkala has pungent taste and is unctuous and sticky in quality with hot potency and katu vipaka. It pacifies vata kapha doshas.

Anjeer has sweet taste and is unctuous and

heavy in quality with cold potency and madhura vipaka. It pacifies vata pitta doshas.

Munakka has sweet taste and is unctuous and heavy in quality with cold potency and madhura vipaka. It pacifies vata pitta doshas. Giloy sat has astringent and bitter tastes and is light in quality with hot potency and madhura vipaka. It pacifies vata pitta doshas. Ashwagandha has pungent, astringent and bitter tastes; is unctuous and light in quality; with hot potency and katu vipaka. It pacifies all three doshas.

Scientific Evidence of Typhogrit:

Patanjali Research Foundation has developed the reverse phase High Performance Liquid chromatography (HPLC) method at two different wavelengths, 270 and 320 nm to study the phytochemicals present in Typhogrit. Eight and eleven major compounds were found at 270 and 320 nm respectively as shown in Fig.1. These compounds were highly polar in nature and might be responsible for major activities.

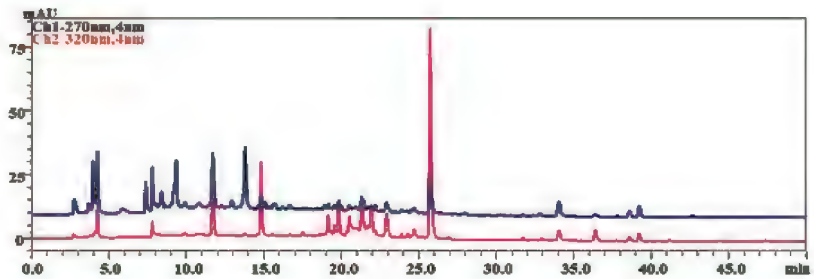


Fig 1: High Performance Liquid Chromatography with PDA (HPLC-PDA) detector at 270 nm and 320 nm wavelength confirms the presence of phytochemicals from Typhogrit. At 270 nm wavelength black chromatogram shows about eight major compounds similarly 320 nm wavelength shows eleven major compounds.

Dose and Method of Use of Typhogrit:

Dose and Frequency	One teaspoonful, twice a day
Adjuvant	Luke warm water
Or as directed by the physician.	

Tablet

Arogya Vati Advanced

आरोग्य वटी एडवांस्ड

Introduction to General Weakness, Cough and Cold, Fever:

Health is a basic part of human well-being, and weaknesses in this area could have a significant influence on people's quality of life. Understanding and addressing general health flaws is critical for sustaining good physical and mental health. A sedentary lifestyle is one of the prevalent weakness. Many people nowadays have sedentary lives, with little physical exercise and lengthy periods of sitting or inactivity. Obesity, cardiovascular illness, and musculoskeletal difficulties are all caused by a lack of physical activity. Another key health risk is poor diet. Many individuals eat diets heavy in processed foods, saturated fats, added sweets, and lacking in critical nutrients. Nutritional deficits, weight gain, and an increased risk of chronic illnesses such as diabetes, heart disease, and some cancers might occur.

Mental health weaknesses are very common in modern society. Depression, anxiety, and stress-related illnesses are getting more common. Work-related stress, societal demands, and lifestyle changes can all contribute to mental health issues. Lastly, lack of sleep is a common issue that affects many people. Sleep deprivation or poor sleep quality can have a negative impact on physical and mental health, including diminished cognitive performance, lower immunological function, and an increased risk of chronic diseases. Acute Upper Respiratory Tract virus Infections (URTIs) are the most common human illnesses, with adults experiencing two to five common colds per year and school-aged children experiencing seven to ten colds per year. The symptoms of a cold can include a coughing, sore throat, runny or stuffy nose, and sneezing. The symptoms of URTIs are so common that self-diagnosis of common cold or influenza (flu) is normal among the general public and clinical diagnosis is usually the only diagnosis used by the physician. Over 200 serologically different viral types are responsible for human URTIs, with the rhinoviruses being the most common cause.

Viruses that causes colds can spread from person to person through the air and close personal contact. We can prevent colds by cleaning our hands, avoid close contact with individual who have colds or any other upper respiratory infections, covering nose and mouth when sneezing and coughing, avoid touching eyes, mouth and nose with unwashed hands, avoid active and passive smoking.

Fever, also referred to as pyrexia, is defined as having a temperature above the normal range due to an increase in the body's temperature set point. There is not a single agreed-upon upper limit for normal temperature with

sources using values between 37.2 and 38.3 °C (99.0 and 100.9 °F) in humans. The increase in set point triggers increased muscle contractions and causes a feeling of cold or chills. This results in greater heat production and efforts to conserve heat. When the set point temperature returns to normal, a person feels hot, becomes flushed, and may begin to sweat. Rarely a fever may trigger a febrile seizure, with this being more common in young children. Fevers do not typically go higher than 41 to 42 °C (106 to 108 °F). A fever can be caused by many medical conditions ranging from non-serious to life-threatening. This includes viral, bacterial, and parasitic infections—such as influenza, the common cold, meningitis, urinary tract infections, appendicitis, Lassa, COVID-19, and malaria. Non-infectious causes include vasculitis, deep vein thrombosis, connective tissue disease, side effects of medication or vaccination, and cancer. It differs from hyperthermia, in that hyperthermia is an increase in body temperature over the temperature set point, due to either too much heat production or not enough heat loss. Treatment to reduce fever is generally not required. Treatment of associated pain and inflammation, however, may be useful and help a person rest. Medications such as ibuprofen or paracetamol (acetaminophen) may help with this as well as lower temperature.

Ingredientsand Medicinal Uses of Arogya Vati Advanced:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Giloy (St.)	*Tinospora cordifolia*	Rasaayan, Tridoshhar, Rakta dosh Har	• Rejuvenating • Pacifies three doshas • Cures blood diseases	200 mg
Neem (St. Bk.)	*Azadiarachta indica*	Pratidushak, Rakta dosh Har	• Cures blood diseases	200 mg
Tulsi (Lf.)	*Ocimum sanctum*	Pratishyayhar, Swas-kas Har	• Cures Cough & breathing difficulties	100 mg

Arogya Vati Advanced is Useful in:

- **Cough and Cold**
- **Fever**
- **General Weakness**

Arogya Vati Advanced: Description in Classical Texts:

Giloyis pungent, bitter, astringent in taste with the physical property of lightness and hot potency. Having madhurvipaka;pacifying vata, pitta, kapha doshas; this drug can cure indigestion, thirst, polyuria, cough, anemia, jaundice, skin diseases, gout, fever, vomiting, asthma, hemorrhoids, dysuria, heart ailments.

Neem has astringent taste with katuvipaka and lightness with cold potency. It pacifies vata, pitta, kapha doshas; and cures skin diseases, nausea, polyuria, fatigue, thirsty, cough,fever, anorexia, ulcer, worm infestation.

Tulsi is pungent, bitter in taste; with dryness properties and hot potency. It pacifies vata and kapha doshas and aggravates pitta dosha. This herb is useful in skin diseases, dysuria, burning sensation, and disease caused by vitiation of blood; and acts as a cardiac toner and appetizer.

Scientific Evidence of Arogya Vati Advanced:

Arogya Vati Advanced was analyzed by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector which showed the presence of different marker compound at 250 nm wavelength mainly protocatechuic acid, caffeic acid, rutin, isoquercetin, luteolin-7-O-Beta glucorunide, rosmarinic acid, and apigenin as shown in Fig. 1. In the chromatograms, the blue line shows the standards and pink line represents the test sample.

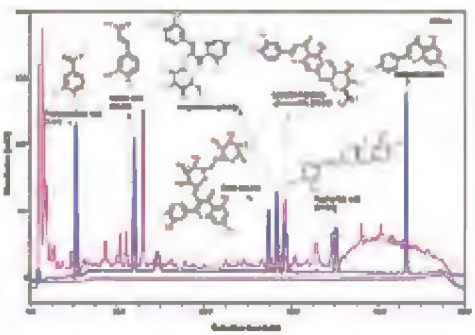


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Arogya Vati Advanced. In Arogya Vati Advanced, the compounds were found at 250 nm wavelength: protocatechuic acid at 5.12 minutes, caffeic acid 11.99 minutes, rutin 26.71 minutes, isoquercetin 27.52 minutes, luteolin-7-O-Beta glucorunide 29.52 minutes, rosmarinic acid 35.92 minutes, and apigenin 43.61 minutes. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of Arogya Vati Advanced:

Dose and Frequency	1-2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

ORTHOGRIT
ऑर्थोग्रिट

Introduction to Orthopedic Pain:

The musculoskeletal system, which supports, shapes, and permits movement for the body, is made up of muscles, tendons, joints, ligaments, bones, and nerves. All parts of the musculoskeletal system are prone to orthopedic disorders. The precise problem will determine the cause of the orthopedic disease. Age-related wear and tear is the root cause of many diseases, particularly those that affect the spine and joints.

Orthopedic diseases can also be brought on by trauma, overuse, and repeated motions. Anti-inflammatory drugs, relaxation, and ice are effective treatments for minor issues. For more severe diseases, prescription drugs, corticosteroid injections, physical therapy, and surgery can be necessary. Chronic orthopedic illnesses that most frequently affect the bones or joints of the musculoskeletal system include arthritis and bursitis. These diseases are distinct from orthopedic injuries, such as a broken bone or shoulder dislocation, which frequently result from acute impact. Contrary to accidental or severe orthopedic injuries, chronic disorders frequently progress over time, beginning slowly and progressively getting worse.

A common disorder that results in discomfort, swelling, and restricted movement is arthritis. Around the body, they have an impact on connective tissues and joints. An arthritic joint is one that is swollen and red. There are more than a hundred different types of arthritis. Any ailment that produces pain, stiffness, and swelling in joints, muscles, tendons, ligaments, or bones is considered to be a rheumatic disease. Women experience arthritis and other rheumatic disorders more frequently than males do. Those that are elderly frequently have these conditions. However, people of all ages could be impacted.

Osteoarthritis and Rheumatoid Arthritis (RA) and are the two types of arthritis that are most prevalent. Rheumatoid Arthritis (RA) is a condition marked by inflammatory changes in the synovial tissue of joints, in cartilage and bone, and, less frequently, in extra-articular locations.In recent years, it has become clear that RA develops from genetic and epigenetic factors, but the environment must also play a significant role. Particularly, the microbiome, which also functions as a "internal" environment, play a significant role. RA, which tends to occur between the ages of 30 and 50, is a chronic, systemic, inflammatory, and autoimmune condition that causes symmetrical polyarthritis of both big and small joints.

Nonsteroidal anti-inflammatory drugs, low-dose oral or intra-articular glucocorticoids,

disease-modifying anti-rheumatic pharmaceuticals, and evaluation of biologic response modifiers/biologics are the three main components of medicinal treatment for rheumatoid arthritis. Osteoarthritis (OA) is a disorder indicated by a variety of changes in the anatomy and physiology of joint tissues, including as cartilage deterioration, skeletal change, and osteophyte production. These changes result in discomfort, stiffness, swelling, and restrictions in the movement of the joints. Pain and a functional deficit, which includes rigidity of joints and malfunction, are among the indications of OA. 80% of people with osteoarthritis have some degree of mobility restriction. 25% of patients cannot carry out their everyday tasks normally as a result, which frequently results in social isolation, reduced work efficiency and depression. In all nations around the world, Osteo-Arthritis (OA) is one of the most prevalent types of musculoskeletal disease. The severity of OA differs with according to joints, the knee, hand, and hip are the joints that are most commonly prone to it. As an example, a higher risk of cardiovascular and all-cause early death is linked to knee and hip OA but not hand OA. Additionally, it has been demonstrated that OA has various pathogenic processes in various joints. While OA of the knee and OA of the hip have been linked to excessive joint load and injury, OA of the hand has been linked to systemic inflammation. In accordance with estimations, symptomatic OA affects 18 and 9.6% of females and males worldwide who are 60 years of age or older, respectively. Alongside the rise in obesity in the population is a prominent cause of OA, sex, race & ethnicity, heredity, food, smoking, and joint injury or trauma are other risk factors.

Ingredients and Medicinal Uses of Orthogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Vacha (Rz.)	*Acorus calamus*	Jwaraghna, Shoolaghna	• Alleviates fever • Pain relieving	5 mg
Motha (Rz.)	*Cyperus rotundus*	Jwar Har, Aam Pachak	• Alleviates fever • Digests accumulated metabolic wastes	25 mg
Devdaru (Ht. Wd.)	*Cedrus deodara*	Shoth-Vedna Har	• Anti-inflammatory-pain relieving	5 mg
Haldi (Rz.)	*Curcuma longa*	Vishaghna, Shothaghna	• Anti-toxic • Anti-inflammatory	5 mg
Kadvi astish (Rt.)	*Aconitum heterophyllum*	Aam Pachak, Naveen Shoth Har, Vishaghna	• Digests accumulated metabolic wastes • Alleviates acute inflammation • Anti-toxic	5 mg
Daruhaldi (St. / Rt.)	*Berberis aristata*	Jwaraghna, Shothhar	• Alleviates fever • Anti-inflammatory	5 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Pipplamool (Rt.)	*Piper longum*	Jeerna Jwar Har, Aam Pachak	• Alleviates chronic fever • Digests accumulated metabolic wastes	5 mg
Chitrak (Rt.)	*Plumbago zeylanica*	Jwaraghna, Shoth Aam Vat Har	• Alleviates fever • Alleviates arthritis • Anti-inflammatory	5 mg
Nishoth (Rt.)	*Operculina turpethum*	Vibandh Har , Shoth Har	• Alleviates constipation • Anti-inflammatory	5mg
Danti (Rt.)	*Baliospermum montanum*	Shoth Har	• Anti-inflammatory	5 mg
Tejpatra (Lf.)	*Cinnamomum xeylanicum*	Aam Pachak, Vatik Rog Har	• Digests accumulated metabolic wastes • Alleviates diseases due to vata dosha	5 mg
Dalchini (Bk.)	*Cinnamomum tamala*	Vedna Har	• Pain relieving	5 mg
Elaichi (Sd.)	*Elettaria cardamomum*	Deepan, Pachan, Nadishul Har	• Improved digestion • Nervous pain relieving	4 mg
Dhaniya (Fr.)	*Coriandrum sativum*	Vatnadishool Har, Trishna Har, Jwaraghna	• Nervous pain relieving, alleviates burning sensation • Alleviates fever	4 mg
Harad (Fr. Rd.)	*Terminalia chebula*	Mriduvirechak, Arshrog Har	• Mild laxative • Alleviates hemmorhoids	4 mg
Chirayata (Wl. Pl.)	*Swertia chirata*	Viband Har, Jwaraghna	• Alleviates constipation • Alleviates fever	4 mg
Baheda (Fr. Rd.)	*Terminalia belerica*	Jwarhar, Udar Vikar Har	• Alleviates fever • Alleviates ascites	3 mg
Amla (Fr.)	*Emblica officinalis*	Rasayan, Tridosh Har	• Rejuvenating • Alleviates all three doshas	3 mg
Chavya (Fr.)	*Piper retrofractum*	Aam Pachak, Pratishyay Jwar Har	• Digests accumulated metabolic wastes • Alleviates rhinitis and fever	3 mg
Vaividang (Fr.)	*Embelia ribes*	Soth Pratikarak	• Anti-inflammatory	3 mg
Gajpipal (Fr.)	*Scindapsus officinalis*	Aam Pachak, Swed Janak	• Digests accumulated metabolic wastes • Promotes perspiration	3 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Sonth (Rz.)	*Zingiber officinale*	Aam Pachak, Shoth Har	• Digests accumulated metabolic wastes • Anti-inflammatory	3 mg
Marich (Fr.)	*Piper nigrum*	Aam Pachak	• Digests accumulated metabolic wastes	3 mg
Pippali (Fr.)	*Piper longum*	Jeema Jwar Har, Sandhi Shul Har	• Alleviates chronic fever • Alleviates pain in joints	3 mg
Punarnava (Rt.)	*Boerhavia diffusa*	Pandu Har, Soth Har, Vedna Sthapak,	• Alleviates anemia, • Anti-inflammatory • Pain relieving	20 mg
Nirgundi (Lf.)	*Vitex negundo*	Shoth Har, Vatik rog Har	• Anti-inflammatory • Alleviates diseases of vata dosha	10 mg
Ashwagandha (Rt.)	*Withania somnifera*	Balya, Shoth Har, Vatik Rog Har	• Strengthening, • Anti-inflammatory • Alleviates diseases of vata dosha	20 mg
Nagarmotha (Rt.)	*Cyperus scariosus*	Aam Paachan, Jwaraghna	• Digests accumulated metabolic wastes alleviates fever	10 mg
Rasna (Lf.)	*Pluchea lanceolata*	Vat Vikar Har, Aamvat Har, Shoth Har	• Alleviates diseases of vata dosha • Alleviates arthritis • Anti-inflammatory	10 mg
Giloy (St.)	*Tinospora cordifolia*	Jwaraghna, Tridoshnasak	• Alleviates fever • Alleviates all three doshas	20 mg
Hadjod (St.)	*Cissus quadrangularis*	Shoth Har	• Anti-inflammatory	10 mg
Fine Powder of:				
Laksha (Ga. Resin)	*Laccifer lacca*	Jwaraghna, Daha Shamak	• Alleviates fever • Alleviates burning sensation	50 mg
Shallaki (Resin)	*Boswellia serrata*	Vat Nadi Vikar Har	• Alleviates diseases of nervous system	50 mg
Guggul Shuddh (Exd.)	*Commiphora wightii*	Shoth- Vendhna Har	• Anti-inflammatory • Pain relieving	75 mg
Muktashukti Bhasma	Classical preparation	Shoolaghna	• Pain relieving	50 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Shuddh Shilajit (Exd.)	*Asphaltum punjabianum*	Balya, Yogvah, Vatik Roghar	• Strengthening • Catalyst • Alleviates diseases of vata dosha	75 mg
Mandoor Bhasma	Classical Preparation	Pandu Har, Shoth Har	• Alleviates anemia • Anti-inflammatory	20 mg
Lauh Bhasma	Classical Preparation	Kshay, Vatik Rog Har	• Alleviates emaciation • Alleviates diseases due to vata dosha	20 mg

Orthogrit is Useful in:

- **Osteoarthritis**
- **Orthopedic Pain**
- **Sprain**
- **Arthritis**

Orthogrit: Description in Classical Texts:

Orthogrit is an Ayurvedic proprietary medicine contains vacha that alleviates fever and is pain relieving. It pacifies vata dosha. It has katu rasa and hot potency. Motha alleviates fever and is useful in painful conditions. Devdaru has Anti-inflammatory- Pain relieving actions.

Haldi has Anti-toxic, Anti-inflammatory activities. Haldi is pungent, bitter in taste, and hot potency. It has dryness property. It pacifies pitta dosha. Useful in disease caused by vitiation of blood.

Kadvi Astish digests accumulated metabolic wastes and alleviates acute inflammation. It also acts as anti-toxic. Daruhaldi alleviates fever and is Anti-inflammatory. It is under hareetakyadi varga in Bhava prakasha. It is bitter and astringent with light and dry properties. The potency is hot with Katu vipaka. It pacifies kapha and pitta doshas.

Pipplamool alleviates chronic fever and digests accumulated metabolic wastes. Chitrak Alleviates fever and arthritis and

is anti-inflammatory. Nishoth alleviates constipation and is anti-inflammatory. Nishoth is mentioned under Guduchyadi varga by Bhava prakasha, and has sweet taste with hot potency and the property of dryness. It pacifies pitta and kapha doshas.

Danti has Anti-inflammatory action. Tejpatra digests accumulated metabolic wastes and alleviates diseases due to vata dosha. Dalchini has pain relieving action. Elaichi gives improved digestion and is nervous pain relieving.

Dhaniya is nervous pain relieving, alleviates burning sensation and fever. Bhava prakasha has included Dhaniya/Dhanyaka under Hareetakyadi varga. This drug is astringent, bitter and pungent in taste; hot in potency; with the qualities of unctuousness and lightness and madhura vipaka; pacifying all three doshas. It is useful in conditions like burning sensation

Harad is mildly laxative and alleviates hemorrhoids. Being rejuvenating in action, this drug has high benefit in osteoarthritis and other painful conditions. Chirayata alleviates constipation and fever. It has bitter taste with hot potency and qualities of dryness and lightness. Baheda alleviates fever and ascites.

Amla is rejuvenating and alleviates all three doshas. Chavya digests accumulated metabolic wastes and alleviates rhinitis and fever. Vaividang mentioned by Bhava prakasha in Hareetakyadi varga has pungent taste with sharpness, lightness and dryness; hot potency and katu vipaka. It promotes good digestion. Vaividang is anti-inflammatory also
Gajpipal digests accumulated metabolic wastes and promote perspiration. Sonth digests accumulated metabolic wastes and is anti-inflammatory. Marich digests accumulated metabolic wastes. Pippali alleviates chronic fever and pain in joints. Punarnava alleviates anemia and is anti-inflammatory and pain relieving. Nirgundi is anti-inflammatory and alleviates diseases of vata dosha.

Ashwagandha is strengthening, anti-inflammatory, and alleviates diseases of vata dosha. Bhavaprakasha has included Ashwagandha in Guduchyadi varga. This drug has astringent and bitter taste and madhura vipaka. It pacifies vata and kapha doshas. It gives strength and is rejuvenating also.

Nagarmotha digests accumulated metabolic wastes and alleviates fever. Rasna alleviates diseases of vata dosha, arthritis, and is anti-inflammatory. Giloy alleviates fever, and pacifies all three doshas. Hadjod is anti-inflammatory. Laksha alleviates fever and burning sensation. Shallaki alleviates diseases of nervous system. Guggul Shuddh is Anti-inflammatory and Pain relieving.

Muktashukti Bhasma has pain relieving effect. Shuddh Shilajit is strengthening, catalyst, and alleviates diseases of vata dosha. Mandoor Bhasma alleviates anemia and is anti-inflammatory. Lauh Bhasma alleviates emaciation and diseases due to vata dosha.

Scientific Evidence of Orthogrit:

The efficacy of Orthogrit was tested at Patanjali Research Foundation Trust against Osteoarthritis. The increase in geriatric population and prevalence of obesity has led to a significant rise in the incidences of Osteoarthritis. It is the second most common rheumatologic problem in India. The articular chondrocytes are mainly responsible for maintenance of catabolic and anabolic processes in the cartilage. Inflammation in the joint region can alter the phenotype of chondrocytes which produce the extracellular matrix (ECM) required for normal cushioning in the articular region. Orthogrit was evaluated in tumour necrosis factor-alpha (TNFα) and interleukin-1 beta (IL-1β) induced 3D cell structure (spheroid) of normal human articular chondrocytes isolated from knee. The phytochemical profile of Orthogrit was evaluated by Ultra-High-Performance Liquid Chromatography based analysis. The pharmacological evaluation of Orthogrit in vitro showed that Orthogrit is cytosafe at all physiologically relevant concentrations and it even reversed cytotoxic effects of the cytokine cocktail (TNFα and IL-1β). Proteoglycans and collagen form majority of the ECM which get degraded in Osteoarthritis. Orthogrit prevented the degradation of these ECM components. C-telopeptide of type II collagen (CTX-II) levels increase with increasing cartilage damage until all of the cartilage is destroyed. So, it is now being used as a biomarker for detection of Osteoarthritis. The levels of CTX-II release from spheroids decreased in Orthogrit treated group. Inflammation in joint increases the degradation of cartilage. It was observed that Orthogrit treatment decreased the activity of IL-1β and NF-κB in reporter cells and also prevented the release of pro-inflammatory cytokine Interleukin-6 from the cytokine cocktail induced spheroids. The production of reactive oxygen species and disbalance in the mitochondrial membrane potential was decreased in Orthogrit treated spheroids. Gene expression-based analysis showed that Orthogrit normalized the levels of JAK2, Matrix metalloproteinases 1 and 3, ADAMTS4, Nrf2, Keap 1 and COX-2. Thus, it was found that Orthogrit possesses anti-inflammatory, anti-oxidant, and chondroprotective properties by which it decreases degradation of cartilage and thereby prevent the progression of Osteoarthritis.

For phytochemical evaluation reverse phase High Performance Liquid Chromatography (HPLC) was developed and five major compounds namely gallic acid, ellagic acid, cinnamic acid, guggulsterone E and guggulsterone Z. Fig. 1 shows an overlay chromatogram of Orthogrit tablet and reference sample at 254 nm wavelength.

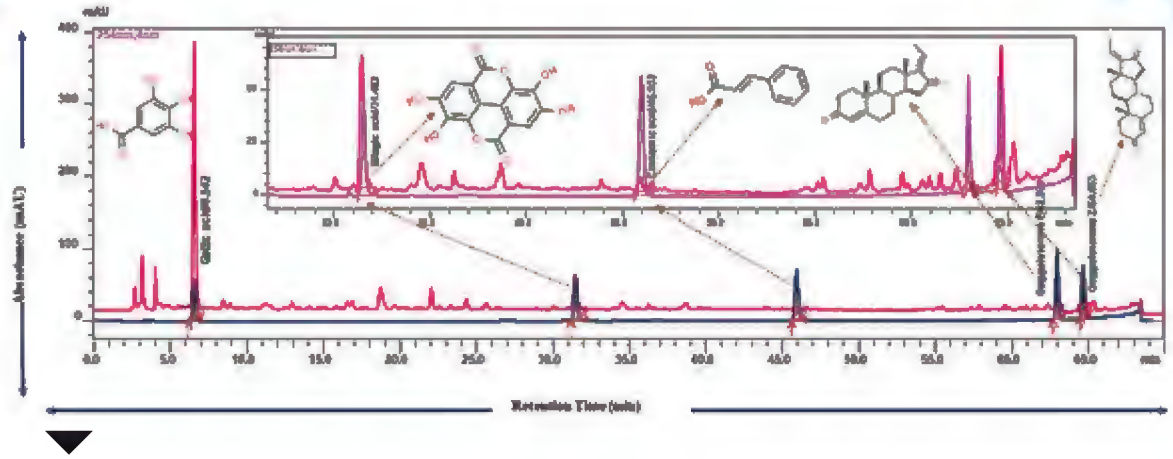


Fig.: 1 High Performance Liquid Chromatographic analysis at 254 nm wavelength confirms the presence of gallic acid at a retention time of 6.543 minutes, ellagic acid at 31.482 minutes, Cinnamic acid at 45.932 minutes, guggulsterone E and Z at 62.971 and 64.663 at minutes respectively. The blue chromatogram represents reference standard and orange chromatogram Orthogrit tablet.

Dose and Method of Use of Orthogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

PEEDANIL Gold पीड़ानिल गोल्ड

Introduction to Osteoarthritis and Pain:

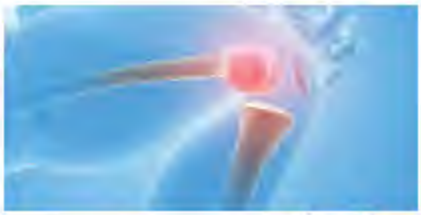
Osteoarthritis (OA) is a disease that will cause wear and tear of soft tissues and affect major joints in the body. As per the National Health Portal of India, Osteoarthritis is the second most common rheumatologic problem with a prevalence of 22% to 39%. Osteoarthritis is more common in women than men. Nearly, 45% of women over 65 years of age have symptoms while 70% of those over 65 years show radiological evidence of Osteoarthritis. Medical management focuses on conservative and surgical procedures. The commonly used management strategies are: use of pain relief analgesics, non-steroidal anti-inflammatory drugs (NSAIDs) and steroidal injections. But clinical trials revealed that these were inconclusive. Surgical treatment of osteoarthritis is a short-term fixation and reverses after a while, thereby, affecting the general health of the individual.

Ingredients, and Medicinal Uses of Peedanil Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Fine Powder of:				
Brihatvat Chintamani Rasa	Classical Preparation	Vata Shamana (Pacifies Vata Dosha) Balya	• Strengthens the body tissues • Pacifies vata dosha	10 mg
Punarnavadi Mndoora	Classical Preparation	Shotha Hara Vata Rakta Shaman	• Useful in reducing inflammation • Useful in gout	60 mg
Shuddha Guggulu (Exd.)	*Commiphora wightii*	Vedana Hara Sandhi Sotha Hara	• Relieves from physical pain • Reduces swelling of joints	250 mg
Mukta Shukti Bhasma	Classical Preparation	Shoolaghna	• Reduces pain	60 mg
Mahavat Vidwamsaka Rasa	Classical Preparaion	Sarva Vata Roga Hara	• Pacifies vata dosha	60 mg
Amavatari Rasa	Classical Preparation	Shotha Hara Amavata Hara	• Reduces inflammation • Pacifies amavata	60 mg

Peedanil Gold is Useful in:

- **Severe Joint Pain**
- **Neuropathic Pain**
- **Arthritic Pain**
- **Muscle Strain**
- **Soft Tissue Injuries**



Peedanil Gold: Description in Classical Texts:

Peedanil Gold is a unique Ayurvedic proprietary medicine containing classically prepared medicine and herbal extracts shown in the table. These ingredients and minerals are known for the treatment of pain and inflammation in our Ayurvedic texts. Ayurveda Sar Sangrah, has detailed about the uses of Punarnavadi Mandoora, Mahavata Vidhvamsak Ras, and Amavatari Ras respectively for vata dosha and pain reduction. Similarly, Bhavaprakash Nighantu, has a description about the use of shuudh guggulu for pain management, reducing swelling and inflammation in joints. Likewise, Rasa Tarangini, specify about the use of Amvatari ras for the reduction in inflammation and Bhaishajya Ratnavali, mentioned the use of Brihatvata chintamani rasa for all types of vatavyadhi and tissue strengthening.

Brihat Vata chintamani Ras is a classical preparation containing swarna bhasma, roupya bhasma, abhraka bhasma, loha bhasma, pravala bhasma, mouktika bhasma and rasasindoora used in numerous vata vyadhi's and also as balya aushadhi.

Punarnavadi mandoora described in Charaka Samhita contains punarnava, shunti, trivrith, maricha, pippali, vidanga, devadaru, kushta, haridra, daruharidra, triphala, danti, chavya, indrayava, pippalimoola, mushta, chitraka, mandura bhasma and gomutra. This is used for the management of Jwara, Pandu, Pleeha roga, and Arshas.

Muktashukti bhasma is prepared from the pearl oyster shell for the management of aamashaya gata vikara and hridaya vikara.

Mahavata vidhwamsaka rasa is herbo mineral preparation described in Rasa Tantra Sara evum Siddha Yoga Sangraha. It contains shuddha parada, shuddha gandhaka, nagabhasma, vanga bhasma, loha bhasma, tamra bhasma, abhraka bhasma, pippali, tankana, shunti, vatsanabha, maricha for which bhavana is

done with trikatu kwatha, triphala kwatha, chitrakmoola, bringaraja, kushta, nirgundi, arka ksheera, amlaki, shunti, nimbu swarasa used for the management of Vata vyadhi and many of neurological diseases. Amavatari rasa is used for the management of amavata and shotha hara.

Scientific Evidence of Peedanil Gold:

Peedanil Gold is a calcium rich mineral formulation, that contains various herbo-mineral formulations and Shuddha Guggul.

Peedanil Gold works effectively in osteoarthritis by strengthening the joints and reducing joint pain and inflammation. It was proven effective in reducing the plasma levels of bio-marker responsible for cartilage degeneration, and repair of wear and tear of muscles and soft tissues which takes place in osteoarthritis.
In preclinical studies conducted at Patanjali Research Foundation, Peedanil Gold demonstrated potential anti-inflammatory activity in cell-based assays and anti-osteoarthritic efficacy. It had anti-osteoarthritic effect in Monosodium iodoacetate (MIA) induced rat model of osteoarthritis.

Peedanil Gold contains analgesic and antiinflammatory phytocompounds, like ellagic acid, guggulsterone E, guggulsterone Z, 5-(hydroxymethyl) furfural, corilagin, cinnamic acid, ferulic acid, gallic acid and protocatechuic acid, as shown in Fig. 1.

In inflamed human macrophagic THP-1 cells., Peedanil Gold reduced the levels of interleukin-6 (IL-6) and interleukin-1 beta (IL-1β), in a dose-dependent manner. Further, in an animal model of monosodium-iodoacetate-induced osteoarthritis, Peedanil Gold reduced pain sensitivity, Kellegren and Lawrence scores,

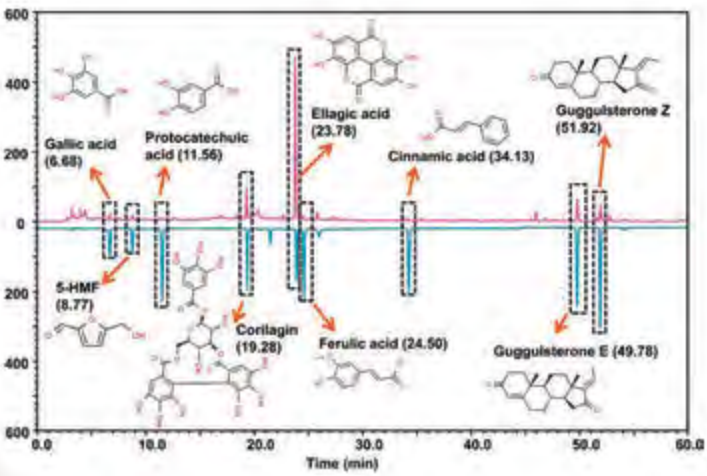


Fig: 1 Phytochemical analysis of Peedanil Gold. Ultra High Performance Liquid Chromatography equipped with Photo Diode Array Detector (UHPLC-PDA) was used to identify and quantify the molecules. Chromatogram in pink represents the sample and blue reference standard. Nine phytochemicals are identified in the sample namely gallic acid, 5-hydroxymethyl furfural (5-HMF), protocatechuic acid, corilagin, ellagic acid, ferulic acid, cinnamic acid, guggulsterone E and guggulsterone Z.

thereby alleviating the osteoarthritic symptoms. Peedanil Gold has reduced joint inflammation in in-vivo studies and promoted cartilage regeneration that is visualized radiologically and histopathologically, as shown in Fig. 2.

In an adjacent study conducted at Patanjali Research Foundation, Peedanil Gold had shown significant reduction of neuronal pain by acting over interleukin (IL-6) a pro-inflammatory cytokine and ant-inflammatory cytokine. It has also acted over the Transient Receptor Potential Vallinoid – 1,2,3,4 (TRPV-1234),

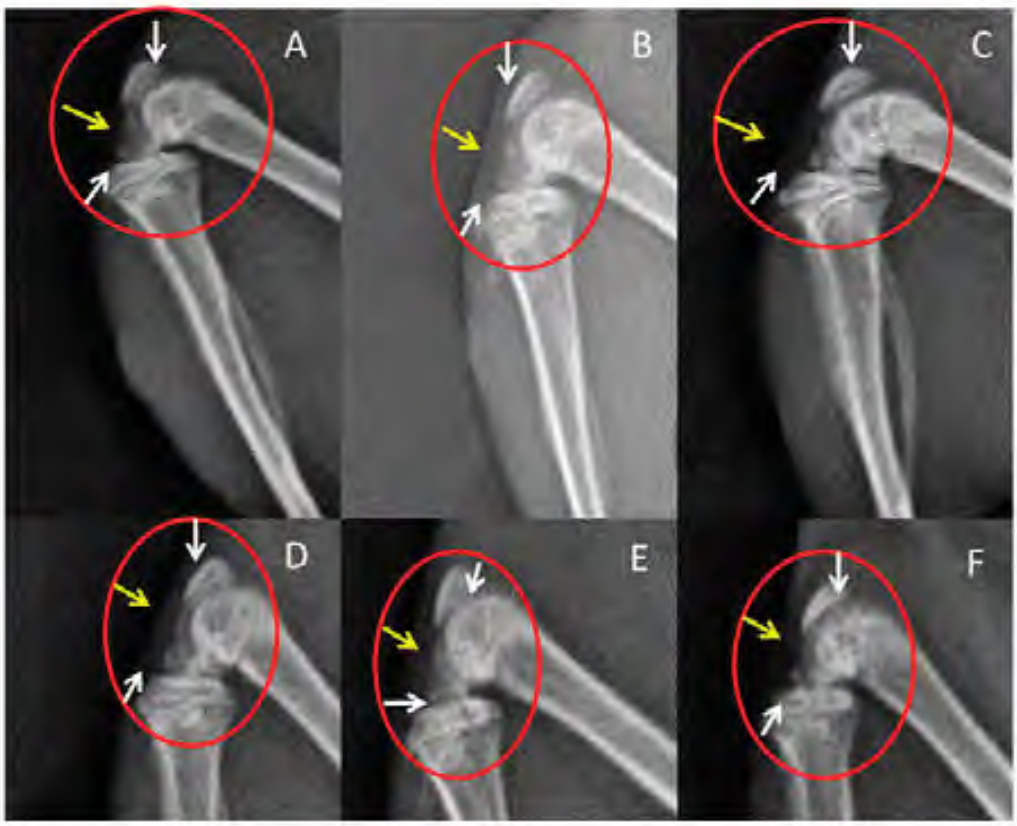


Fig: 2 Representative radiographs of right knee joints of experimental rats. Figure A shows NC group with normal appearance. Figure B shows DC group having distended joint and spacing reduced as indicated by yellow arrow, and increased radiodensity with roughened surfaces of femoral condyles and proximal tibia as indicated by white arrow. Figure C shows comparative arm with standard treatment by indomethacin with regular joint spacing and normal radiodensity with no distension as indicated by yellow arrow. Surfaces of femoral condyles and proximal tibia showed near normal appearance with less osteophytic reactivity as indicated by white arrow. Figure D, E and F shows effect of treatment with Peedanil Gold at different doses. These figures show the ameliorating effect Peedanil Gold has on osteoarthritis affected joints in experimental rats.

Transient Receptor Potential Cation subfamily Melastatin-8 (TRPM-8) and Transit Receptor Potential cation subfamily A-1 (TRPA-1) thereby reducing the pain, as shown in Fig. 3.

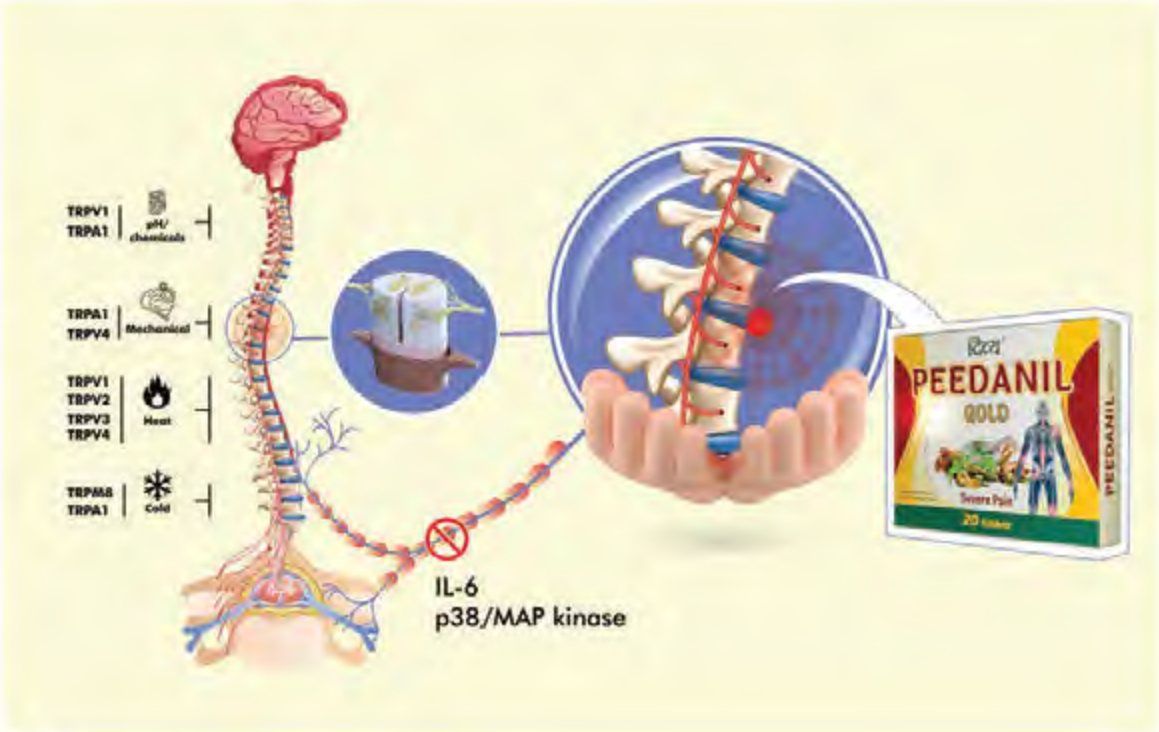


Fig:3 Schematic representation demonstrating the effect of Peedanil Gold on Nerve Inflammation and pain pathways by acting on interleukin 6 (IL-6), Transient Receptor Potential Vallinoid – 1,2,3,4 (TRPV-1234), Transient Receptor Potential Cation subfamily Melastatin-8 (TRPM-8) and Transit Receptor Potential cation subfamily A-1 (TRPA-1).

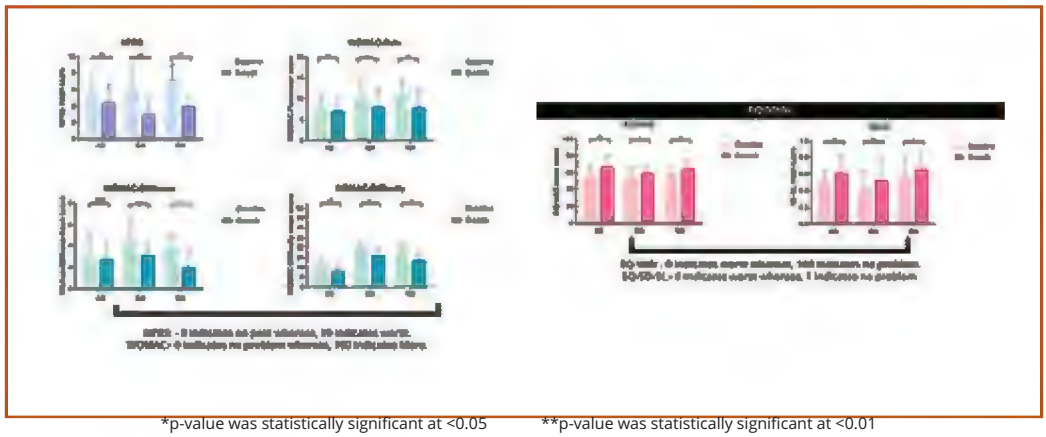
Clinical Survey Data of Peedanil Gold in Arthritic Pain:

The Clinical Survey study of Peedanil Gold was conducted on 276 patients, using the following questionnaires: Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), EuroQOL-5 Dimension-5 Level Questionnaire (EQ-5D-5L) and Numeric Pain Rating Scale (NPRS).

Western Ontario and McMaster Universities Osteoarthritis Index showed a reduction in pain, stiffness, and difficulty in physical activity from the baseline. On the other hand, in EuroQOL-5 Dimension-5 Level Questionnaire, Visual Analog Scale (EQ-VAS) and 5 Dimension-5 Level (5D-5L) showed an improvement in the quality of life of the patients.

Moderate to strong correlation was observed

in all the clinical assessment parameters, and negative significant correlation values were observed with Visual Analog Scale (EQ-VAS) and 5 Dimension-5 Level (5D-5L), due to the reverse scoring of EQ-5D, as the pain, stiffness, and difficulties in activity decrease the quality of the life of the patient increases. There was a reduction in the total Numeric Pain Rating Scale (NPRS). The results of clinical survey data are shown in Fig. 4.



*p-value was statistically significant at <0.05 **p-value was statistically significant at <0.01

Fig:4 The data represent the mean change in the score of Numeric Pain Rating Scale (NPRS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), EuroQol 5 Dimension-5 Level (EQ-5D-5L) and Visual Analog Scale (EQ-VAS) in patients with Rheumatoid Arthritis (RA), Osteoarthritis (OA), and Ankylosing Spondylitis (AS), indicates the positive response towards the treatment.

It was also observed that patients with moderate to severe Numeric Pain Rating Scale scores responded best after the use of Peedanil Gold along with other approaches like panchakarma, naturopathy, and yoga.

Dose and Method of Use of Peedanil Gold:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://pubmed.ncbi.nlm.nih.gov/35600853/

PeedaNIL पीड़ानिल

Roll-On **Spray**

Introduction to Sports Injury, Joint Pain, Sprain, Inflammation and Stiffness:

Injuries occurring during sports are common among athletes and individuals who participate in physical activities. These injuries not only affect an athlete's physical well-being but can also impact their mental health, their performance and overall their quality of life. Sports injuries can result from various factors like overuse, and poor technique. Sports injuries can be classified into acute or chronic injuries where acute injuries occur due to sudden trauma and chronic injuries occur developing over time due to repetitive stress.

Joint pain can occur as a result of various factors, such as injuries, infections, autoimmune disorders, or wear and tear. It can affect any joint in the body, including the knees, shoulders, hips, and ankles.
Joint pain is often characterized by aching, stiffness, swelling, and reduced mobility. Osteoarthritis, tendinitis, bursitis, and ligament sprains are common causes of joint discomfort.

Treatment for joint pain depends on the underlying cause and may involve rest, physical therapy, pain medications, and in severe cases, surgical intervention. Sprains are injuries to ligaments, which are tough bands of tissue that connect bones within a joint. These injuries commonly occur when a joint is subjected to excessive force or sudden twisting, stretching, or bending motions. Ankle sprains, for example, are one of the most frequently encountered sports injuries. The severity of a sprain can range from mild, involving only a few stretched ligament fibers, to severe, involving complete tearing of the ligament. Prompt diagnosis and appropriate management are crucial for the successful recovery from a sprain. Inflammation is a natural process that occurs in the body as a response to injury, infection, or tissue damage. It is part of the body's immune system and plays a crucial role in initiating the healing process. While inflammation is typically a protective mechanism, chronic or excessive inflammation can lead to various health problems.

When the body detects an injury or infection, immune cells release chemical signals, such as cytokines and chemokines, which attract other immune cells to the affected area. This leads to increased blood flow, causing redness and warmth, and increased permeability of blood vessels, allowing immune cells to move more easily into the damaged tissue. The immune cells, particularly white blood cells, work to remove any harmful pathogens, such as bacteria or viruses, as well as damaged cells and debris from the affected area. They release additional inflammatory mediators to further

enhance the immune response. This process helps to eliminate the source of the problem and promotes tissue repair. An immediate reaction, acute inflammation typically lasts a few days to a few weeks. Symptoms like pain, swelling, redness, heat, and function loss occur in the affected area where as Chronic inflammation can be caused by persistent infections, autoimmune disorders (in which the immune system incorrectly attacks healthy tissues), long-term exposure to irritants (such as cigarette smoke), or lifestyle factors such as poor diet and obesity. Stiffness is a common complaint among athletes following sports injuries. It refers to the reduced range of motion and difficulty in moving a joint freely. Stiffness often accompanies joint pain and inflammation. Scar tissue formation, muscle imbalances, and joint instability are common contributors to stiffness. Physical therapy, stretching exercises, and gradual return to activity are crucial in overcoming stiffness and restoring normal joint function. The general treatment or management of sports injury, joint pain, sprains, inflammation, and stiffness depends on the type and severity of the conditions. Overall treatment includes rest, ice therapy, compression and elevation i.e. RICE, physical therapy including exercises, stretches, medications (NSAIDs) given for pain and inflammation.

Ingredients and Medicinal Uses of Peedanil Spray & Roll-On:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Oil of:				
Gandhpura (Sd.)	*Gaultheria fragrantissima*	Aamvaat	• Alleviates arthritis	6 g
Nilgiri (Lf.)	*Eucalyptus globulus*	Aamvaat	• Alleviates arthritis	2 g
Dry Extract of:				
Pudina Sat (A. Pt.)	*Mentha piperata*	Aamvaat, Sugandhit	• Alleviates arthritis • Fragrant	17 g
Kapoor Bhimseni Sat (Wd.)	*Cinnamomum camphora*	Vednahar, Shothhar	• Pain relieving • Anti-inflammatory	13 g
Ajwain Sat (Fr.)	*Trachyspermum ammi*	Sandhi Shool Har	• Alleviates pain in joints	12 g

Peedanil Spray & Roll-On is Useful in:

- **Sports Injury**
- **Joint Pain**
- **Sprain**
- **Inflammation**
- **Stiffness**

Peedanil Spray & Roll-On Description in Classical Texts:

Peedanil Spray and Roll-On is an Ayurvedic proprietary medicine containing ingredients that reduce pain and inflammation. Gandhpura is a powerful analgesic, stimulant, anti-arthritic and anti-rheumatic, anti-spasmodic, and detoxifier, and stimulates proper blood circulation. Nilgiri is pungent, bitter and astringent in taste with qualities of lightness and unctuousness; hot potency and katu vipaka. It pacifies kapha pitta oshas and pacifies pain.

Pudina Sat is sweet in taste, has cold potency, heavy property. It pacifies kapha dosha. It acts as a laxative. It cures chronic fever and acts like a cardiac toner. Kapur has bitter, pungent and sweet tastes with properties of lightness and sharpness; hot potency and katu vipaka. It pacifies all three doshas

Ajwain Sat is pungent and bitter in taste, with hot potency, light and dry property and pungent vipaka. It pacifies vata and kapha doshas. It acts as an appetizer and digestive. It cures loss of appetite, abdominal pain and tumor, spleen diseases.

Scientific Evidence of Peedanil Spray & Roll-On:

Peedanil Spray and Roll-On was characterized with the help of Gas chromatography–mass spectrometry (GC–MS) technique., the various compounds were obtained namely camphor, methanol, methyl salicylate, and thymol in the analysis of Peedanil Spray and Roll-On, as shown in Fig. 1.

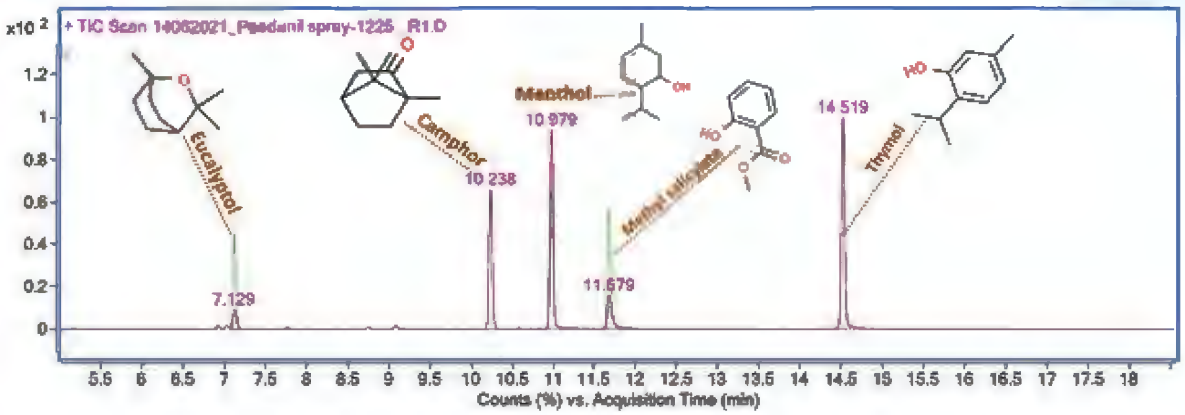


Fig. 1. The Gas chromatography–mass spectrometry (GC–MS) chromatogram of Peedanil Spray and Roll-On. The GC–MS chromatogram indicated the existence of different compounds eucalyptol, camphor, menthol, methyl salicylate, and thymol in Peedanil Spray and Roll-On.

Dose and Method of Use of Peedanil Spray & Roll-On:

As directed by the physician.

PeedaNIL Ointment
पीड़ानिल ऑइंटमेंट

Introduction to Pain, Arthritic Pain, Joint Pain, Sprain, Muscle Strain and Sports Injury:

Pain is a complex sensory and emotional experience that can be described as an unpleasant sensation or discomfort. It serves as a protective mechanism by alerting the body to potential injury by being a sensory and emotional reaction to actual or potential tissue damage. Pain can be either acute or chronic and can vary widely in terms of intensity, duration, and location. A particular injury or condition is frequently the cause of acute pain, which typically strikes unexpectedly. It acts as a warning sign, alerting people to the fact that something is wrong and requiring them to take urgent action to stop any additional damage. For instance, the moment your hand touches a hot surface, a sharp pain rushes through your body, forcing you to pull back to prevent burning. On the other hand, chronic pain lasts for months or even years at a time and is persistent over a long length of time.

Initially, pain could result from an illness or injury, can arise from various sources, such as injuries, diseases, or underlying health conditions. Understanding different types of pain is crucial for effective diagnosis, management, and treatment. In this introduction, we will explore six common types of pain: arthritic pain, joint pain, sprain, muscle strain, and sports injuries. Arthritic pain refers to the discomfort and inflammation that occur in the joints due to arthritis, a condition characterized by the degradation of joint cartilage. Arthritis can affect various joints, including the hands, knees, hips, and spine. The pain associated with arthritis is often chronic and can range from mild to severe. It is typically characterized by joint stiffness, swelling, and limited range of motion.

Effective management of arthritic pain involves a combination of medication, physical therapy, lifestyle modifications, and, in some cases, surgical interventions. Joint pain can occur as a result of various factors, such as injuries, infections, autoimmune disorders, or wear and tear. It can affect any joint in the body, including the knees, shoulders, hips, and ankles. Joint pain is often characterized by aching, stiffness, swelling, and reduced mobility. Treatment for joint pain depends on the underlying cause and may involve rest, physical therapy, pain medications, and in severe cases, surgical intervention.

A sprain refers to the stretching or tearing of ligaments, which are the connective tissues that hold bones together in a joint. Sprains commonly occur in the ankles, wrists, and knees, often as a result of sudden twisting or

impact. The symptoms of a sprain include pain, swelling, bruising, and difficulty in using the affected joint. Treatment for sprains typically involves the RICE protocol (Rest, Ice, Compression, Elevation), pain medications, and physical therapy to restore strength and flexibility. Muscle strain, also known as a pulled muscle, happens when muscle fibers stretch or tear due to excessive or sudden force. This type of injury often occurs during physical activities or sports that involve repetitive motions or overexertion.

Symptoms of a muscle strain may include pain, swelling, muscle spasms, and limited range of motion. Treatment usually involves rest, ice therapy, compression, elevation, pain relief medications, and physical therapy to aid in the healing process. Sports injuries encompass a broad range of injuries that occur during athletic activities. These injuries can affect various body parts, including muscles, tendons, ligaments, and bones. Sports injuries can result from acute trauma, overuse, poor technique, inadequate warm-up, or insufficient protective equipment. The most common sports injuries include sprains, strains, fractures, dislocations, and concussions. Treatment for sports injuries depends on the type and severity of the injury but often involves a combination of rest, physical therapy, pain management, and in some cases, surgical intervention.

Ingredients and Medicinal Uses of Peedanil Ointment:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Oil of:				
Gandhpura Oil (Sd.)	*Gaultheria fragrantissima*	Aam Vata Har, Shoth-Vedna Har	• Cures rheumatoid arthritis	16.8 g
Nilgiri Oil (Lf.)	*Eucalptus globule*	Sthanik Shoth Har, Aam Vata Har	• Reduces localized pain • Cures rheumatoid arthritis	0.6 g
Peedantak Oil	Proprietary Product	Sandhi Shoth Har	• Reduces joint pain	10 g
Mustard Oil (Sd.)	*Brassica campestris*	TwakSnehak, VatikRog Har	• Gives nourishment to the skin	10 g
Linseed Oil (Sd.)	*Linum usitatissimum*	Sthanik Shoth Har	• Reduces localized pain	2 g
Malkangani oil (Sd.)	*Celastrus paniculatus*	Uttejak, Shothaghna	• Stimulant swelling	2 g
Dry Extract of:				
Pudina Sat (Lf.)	*Mentha piperata*	Sthanik Sangya Har	• Local anesthetic	18.8 g
Kapoor bhimseni (Wd.)	*Dryobalanops camphora*	Sandhishul Har	• Reduces joint pain	5.6 g
Ajwain Sat (Fr.)	*Trachyspermum ammi*	Sandhishul Har	• Reduces joint pain	5.3 g
Chilli Extract (Sd.)	*Capsicum annum*	Sthanik Peeda Har	• Reduces localized pain	1.5 g

Peedanil Ointment is Useful in:

- **Arthritic Pain**
- **Joint Pain**
- **Muscle Strain**
- **Sports Injury**

Peedanil Ointment: Description in Classical Texts:

Peedanil ointment is an Ayurvedic proprietary medicine that incorporates ingredients aimed at alleviating pain. Gandhpura, known for its potent analgesic properties, also serves as a stimulant, anti-arthritic, anti-rheumatic, anti-spasmodic, detoxifier, and promoter of proper blood circulation. Nilgiri, characterized by its pungent, bitter, and astringent taste, possesses qualities of lightness and unctuousness, along with hot potency and katu vipaka. It helps pacify kapha and pitta doshas, alleviating pain.

Pudina Sat, sweet in taste with a cold potency and heavy property, acts as a pacifier for kapha dosha. It functions as a laxative, aiding in the treatment of chronic fever and serving as a cardiac toner. Kapur, with bitter, pungent, and sweet tastes, and properties of lightness and sharpness, exhibits hot potency and katu vipaka. It contributes to pacifying all three doshas.

Ajwain Sat, with a pungent and bitter taste, hot potency, and light and dry property, along with pungent vipaka, effectively pacifies vata and kapha doshas. It acts as both an appetizer and digestive, addressing issues such as loss of appetite, abdominal pain, and conditions like tumors and spleen diseases. Chilli, pungent in taste and characterized by lightness, dryness, and sharpness, exhibits hot potency and pacifies kapha and vata doshas, while increasing pitta dosha.

Mustard Oil, featuring pungent and bitter tastes, hot potency, and heavy, unctuous, and sharp properties, along with pungent vipaka, aids in pacifying vata and kapha doshas. It also functions as an appetizer. Linseed Oil, sweet and bitter in taste with hot potency, heavy property, and pungent vipaka, is beneficial for the eyes and addresses seminal diseases, while pacifying vata, pitta, and kapha doshas. Malkangani Oil, with pungent and bitter tastes, hot potency, sharp property, and madhur vipaka, serves as a laxative and emetic, pacifying vata and kapha doshas.

Scientific Evidence of Peedanil Ointment:

Peedanil Ointment was characterized by using Gas chromatography–mass spectrometry (GC–MS) technique. During the analysis of Peedanil Ointment, the several compounds were observed namely camphor, methanol, methyl salicylate, and thymol, as shown in Fig. 1.

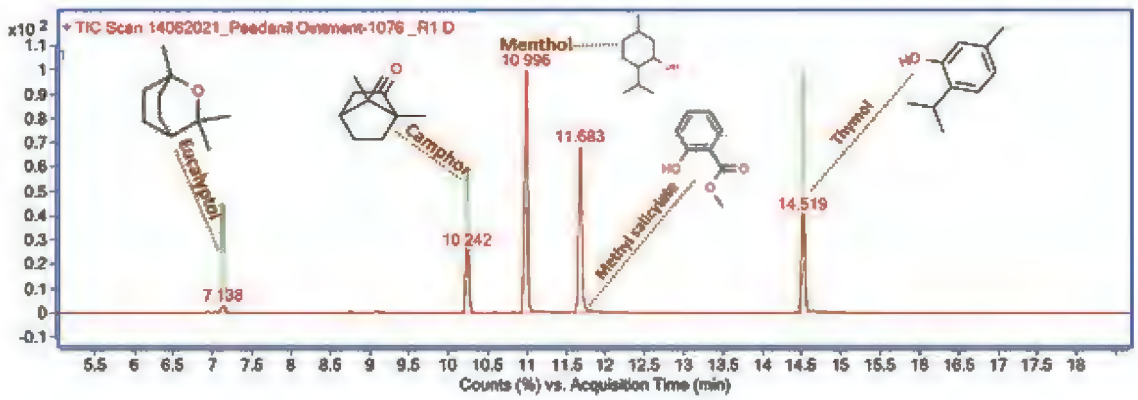


Fig. 1. The Gas chromatography–mass spectrometry (GC–MS) chromatogram of Peedanil Ointment. The GC–MS chromatogram showed the presence of eucalyptol, camphor, menthol, methyl salicylate, and thymol in Peedanil Ointment.

Dose and Method of Use of Peedanil Ointment:

As directed by the physician.

PeedaNIL Pain Relief Patch

पीड़ानिल पेन रिलीफ पैच

Introduction to Sports Injury, Joint Pain, Sprain, Inflammation and Stiffness:

Sports-related injuries are frequent among athletes and those who engage in physical activity. These injuries have an influence on an athlete's quality of life overall as well as their physical health. They can also have an effect on their performance. Overuse and poor technique are only two examples of the many factors that can cause sports injuries. Acute or chronic sports injuries can be categorized, with acute injuries occurring as a result of a sudden trauma and chronic injuries growing over time as a result of recurrent stress. A number of things, including traumas, infections, autoimmune diseases, and general wear and tear, can cause joint discomfort. Any joint in the body, including as the shoulders, hips, ankles, and knees, might be impacted by it.

Common symptoms of joint pain include aching, stiffness, edema, and reduced mobility. Joint pain is often brought on by osteoarthritis, tendinitis, bursitis, and ligament sprains. Depending on the underlying reason, joint pain may be treated with rest, physical therapy, painkillers, and in extreme circumstances, surgery. Sprains are wounds to ligaments, strong bands of tissue that attach bones to one another within a joint. When a joint is exposed to excessive stress or abrupt twisting, stretching, or bending actions, these injuries frequently happen. For instance, one of the most typical sports injuries is an ankle sprain. A sprain can be moderate, including only a few strained ligament fibres, or severe, with the entire ligament being torn.

The successful recovery from a sprain depends on an early diagnosis and suitable treatment. The body naturally experiences inflammation in reaction to injury, infection, or tissue damage. It is an essential component of the body's immune system and helps to start the healing process. Although it serves as a protective mechanism in most cases, persistent or severe inflammation can cause a number of health issues. Immune cells that have been exposed to damage or infection emit chemicals called cytokines and chemokines that draw other immune cells to the site of the injury or infection.

This results in increased blood flow, which causes redness and warmth, as well as increased blood vessel permeability, which makes it easier for immune cells to enter the wounded tissue. The immune cells, in particular white blood cells, work to clear the afflicted region of any dangerous pathogens, such as bacteria or viruses, damaged cells, and debris.

To further boost the immune response, they produce more inflammatory mediators. This procedure encourages tissue restoration while assisting in removing the problem's root cause. Acute inflammation, a prompt response, usually lasts a few days to a few weeks.

The afflicted region experiences symptoms including pain, edema, redness, heat, and function loss. Chronic inflammation can be brought on by ongoing infections, autoimmune diseases (in which the immune system assaults healthy tissues without reason), prolonged contact with irritants (such as cigarette smoke), or unhealthy eating habits and obesity. Following sports injuries, stiffness is a typical complaint among athletes. It describes a joint's restricted range of motion and difficulty moving freely. Joint discomfort and swelling frequently go hand in hand with stiffness. Stiffness is frequently caused by muscular imbalances, the development of scar tissue, and unstable joints.

In order to get over stiffness and return to activities gradually, physical therapy, stretching exercises, and stretching exercises are essential. The nature and severity of the problems determine the general management or therapy of sports injuries, joint discomfort, sprains, inflammation, and stiffness. RICE, physical therapy, which includes exercises and stretches, and drugs (NSAIDs) administered for pain and inflammation are all parts of the overall treatment plan.

Ingredients and Medicinal Uses of Peedanil Pain Relief Patch:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each patch contains
Oils of:				
Gandhpura (Sd.)	*Gaultheria Fragrantissima*	Aamvaat	• Alleviates arthritis	1.80%
Nilgiri (Lf.)	*Eucalyptus globulus*	Aamvaat	• Alleviates arthritis	0.60%
Dry Extract of:				
Pudina Sat (Lf.)	*Mentha piperata*	Aamvaat, Sugandhit	• Alleviates arthritis • Fragrant	4.95%
Kapoor Bhimseni (Wd.)	*Cinnamomum camphora*	Vednahar, Shoth Har	• Pain relieving • Anti-inflammatory	3.75%
Ajwain Sat (Fr.)	*Trachyspermum ammi*	Sandhi Shool Har	• Alleviates pain in joints	3.60%
Soya Extract (Sd.)	*Glycine max*	Vatahara	• Pacifies vata dosha	0.30%

Peedanil Pain Relief Patch is Useful in:

- **Sports Injury**
- **Joint Pain**
- **Sprain**
- **Inflammation**
- **Stiffness**

Peedanil Pain Relief Patch: Description in Classical Texts:

This Ayurvedic proprietary medicine contains ingredients that reduce pain and inflammation. Gandhpura is a powerful analgesic, stimulant, anti-arthritic and anti-rheumatic, anti-spasmodic, detoxifier, and stimulates proper blood circulation. Nilgiri is pungent, bitter and astringent in taste with qualities of lightness and unctuousness; hot potency and katu vipaka. It pacifies kapha pitta oshas and pacifies pain.

Pudina Sat is sweet in taste, has cold potency, heavy property. It pacifies kapha dosha. It acts as a laxative. It cures chronic fever and acts like a cardiac toner. Kapur has bitter, pungent and sweet tastes with properties of lightness and sharpness; hot potency and katu vipaka. It pacifies all three doshas

Ajwain Sat is pungent and bitter in taste, with hot potency, light and dry property and pungent vipaka. It pacifies vata and kapha doshas. It acts as an appetizer and digestive. It cures loss of appetite, abdominal pain and tumor, spleen diseases. Soy has sweet and astringent taste with qualities of heaviness and unctuousness; hot potency and madhura vipaka. It acifies vata dosha.

Scientific Evidence of Peedanil Pain Relief Patch:

Peedanil Pain Relief patch was characterized with the help of Gas chromatography–mass spectrometry (GC–MS) technique. In Peedanil Pain Relief patch, the different compounds were observed namely camphor, methanol, methyl salicylate, and thymol, as shown in Fig. 1.

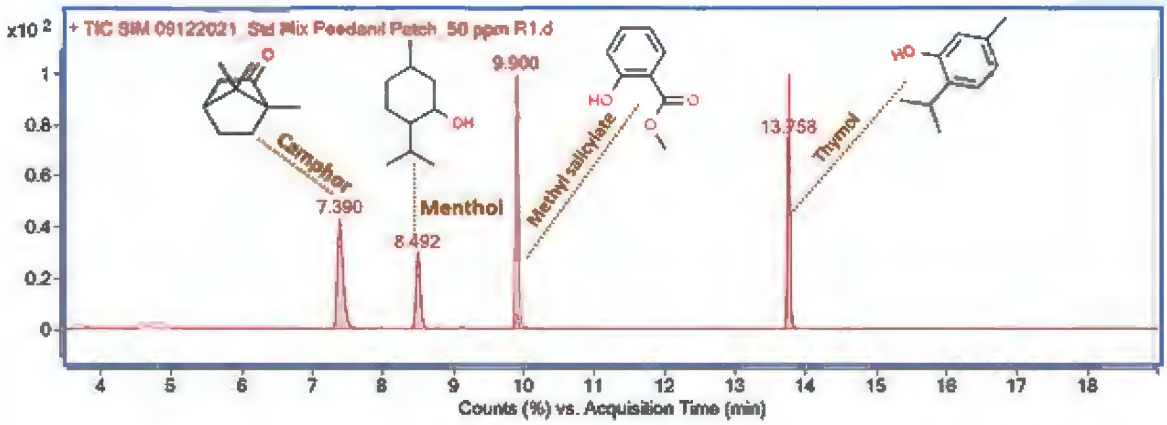


Fig. 1. The Gas Chromatography with Mass Detector (GC–MS) analysis of Peedanil Pain Relief patch. The GC–MS chromatogram indicated the presence of camphor, methanol, methyl salicylate, and thymol in Peedanil Pain Relief patch.

Dose and Method of Use of Peedanil Pain Relief Patch:

As directed by the physician.

Tablet

CYSTOGRIT DIAMOND सिस्टोग्रिट डायमण्ड

Introduction to Carcinoma, Cysts and Abnormal Growths:

When cells replicate too quickly, a tumor forms. According to National Cancer Institute the definition given for, a tumor is "an abnormal mass of tissue that results when cells divide more frequently than they should or do not die when they should."

Depending on the form, tumors can range in size from a little nodule to a huge mass and can develop practically anywhere in the body. The good tumor does not exist. These hordes of altered and malfunctioning cells have the ability to spread throughout the body, assault organs, and inflict discomfort and physical harm. However, not all tumors are aggressive or malignant (cancerous). A tumor is a lump of tissue that develops abnormally from a collection of cells. Your doctor will first assess if a tumor is benign or malignant if you are diagnosed with one. Malignant tumors represent a greater threat than benign tumors, despite the fact that they can also be painful and harmful. Malignant cells are more likely to metastasis, or migrate to other parts of the body, whereas benign tumors often do not invade and do not spread. They also grow more quickly.

In most cases, benign tumors are not life-threatening and are not malignant. Though benign cells can originate anywhere in the body, they seldom invade neighbouring tissue or spread outside of the tumor, unlike their malignant siblings. Instead, benign cells tend to stay within the tumor. Most benign tumors have a modest growth rate, and some never require treatment. Others may pose major health problems if they grow in the brain or on the spinal cord, press against surrounding organs, nerves, or blood vessels, or both. Surgery is frequently needed to remove these tumors. Most benign tumors don't recur after being removed. Before performing surgery to remove a benign tumor, the doctor may decide to keep a close eye on it to see if it develops to the point where it becomes problematic. This approach, called active surveillance, helps delay or even avoid surgery completely.

Cancerous cells grow into a bulk and replicate to cause malignant tumors. Cancer cells may penetrate adjacent tissue, unlike benign tumors. Additionally, they could separate from tumors and spread throughout the body through a process known as metastasis. Knowing where cancer started is crucial because it influences treatment choices when it does spread. The doctor might be able to do surgery to eradicate the cancer if, for instance, the malignant tumors found in the chest wall started there. However, if the tumors have already migrated from elsewhere in the body, the patient may

first require a systemic (whole-body) treatment like chemotherapy.

Cysts are abnormal sacs filled with fluid that can form in any section of the body's tissues. They come in a wide variety and are relatively frequent. Cysts can be brought on by traumas, tumors, parasites, and infections. Typically, they are not malignant.

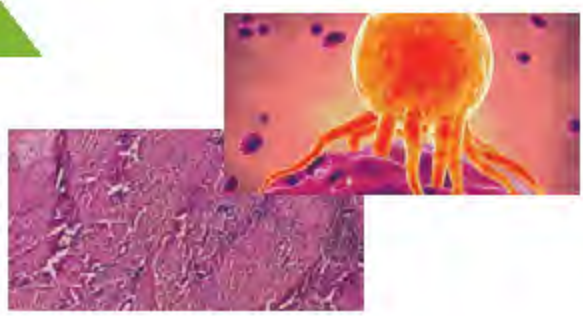
Skin cysts are closed, non-cancerous pockets or pouches of tissue that contain liquid or another substance. In certain cases, they may feel like tiny peas just below the skin's surface. When pressure is applied, they often feel smooth and may roll under the skin. You can observe a tiny surface opening, known as an epidermal pore, if you look closely. Skin tumours are abnormal tissue growths that can be benign (harmless) or malignant (cancerous). As people age, skin tumors become exceedingly prevalent.

Ingredients and Medicinal Uses of Cystogrit Diamond:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Kanchnar (Bk.)	*Bauhinia varigata*	Galgand-Granthi RogHar	• Cures thyroid disorders and tumors	301.72mg
Haldi (Rz.)	*Curcuma longa*	Shothaghna, Vishaghna	• Anti-inflammatory • Ant-toxic	51.72 mg
Fine Powder of:				
Shila Sindoor	Classical Preparation	Aruchi-Galgand Har	• Taste enhancing • Cures thyroid disorders	34.48 mg
Muktashukti Pishti	Classical Preparation	Raktaj Gulma Har	• Cures abdominal swellings of rakta origin	68.97 mg
Moti Pishti	Classical Preparation	Pittaj Vikar Har, Kshay Rog Har	• Cures diseases caused by pitta dosha • Cures phthisis	17.24 mg
Tamra Bhasma	Classical Preparation	Arbud Har, Gulma Har	• Anticancer • Cures abdominal swellings	17.24 mg
Heerak Bhasma	Classical Preparation	Rasayan, Karkat Rog Har	• Rejuvenating • Anticancer	8.62 mg

Cystogrit Diamond is Useful in:

- **Benign and Malignant Tumors**
- **Cysts and Abnormal Growth**



Cystogrit Diamond: Description in Classical Texts:

Cystogrit Diamond was formulated using heerak bhasma as an important ingredient. It makes this medicine very effective against various tumors. Bhava prakasha mentiones Kanchnar under Guduchyadi varga. This drug has astringent taste and light and dry qualities. It has katu vipaka. It is cold in potency and pacifies Kapha and pitta doshas. By its prabhav, it is Gandamala nashana,curing thyroid disorders. This drug has the ability to cure tumors located at various parts of the body.

Bhava prakasha has mentioned Haridra under Hareetakyadi Varga. It has pungent and bitter tastes. It pocess quality of dryness and is hot in potency. It pacifies kapha pitta doshas. It has anti-inflammatory action. It can cure blood related diseases. It has wound healing potential.

Prepared with purified realgar, purified mercury and purified Sulphur mixed with aloe vera juice and incinerated, shila sindoor is given in aiding management of skin diseases and respiratory illness. Muktashukti pishti is used for various conditions from indigestion to cancer. It has sweet and pungent tastes and is useful in gastritis and other conditions like gastritis.

Moti pishti can alleviate mano doshas. It is prepared by taking mukta bhasma and triturate with rosewater. Tamra bhasma may cure anemia, kapha-pitta roga and skin diseases. It can be administered with Trikatu Kashaya, ghee, honey, durlabha kwath, ardraka rasa or guduchi rasa. Heerak bhasma pacifies all three doshas. It is effective in respiratory ailments.

Scientific Evidence of Cystogrit Diamond

In a research study conducted by Patanjali Research Foundation, the therapeutic potential of Cystogrit Diamond against leukemia was deciphered. The study determined the potential of Cystogrit Diamond in inducing differentiation therapy in leukemia cells. The commercially available leukemia-derived immortalized cell lines were utilized to study the anti-leukemic effects of Cystogrit Diamond. Treatment of Cystogrit Diamond in both the cell lines, HL60 and K562 induced drastic nuclear morphological changes indicating the induction

of differentiation in the leukemic cell lines. Giemsa staining demonstrates modulations in nuclear shape and segmentation of both cell line models used in the study, K562 and HL60 cells when treated with Cystogrit Diamond. Surface membrane proteins, known as cluster of differentiation (CD markers) help biomarkers in assessing differentiation in leukemia cells. In HL60 cells, Divya Cystogrit showed a significant rise of ~ 11 % CD11b and CD14 positive cells. Interestingly, K562 showed a much higher rise compared to HL60. CD11b positive cells increased by ~ 16 % whereas CD41 positive cells increased by ~ 33 %. In addition, Cystogrit Diamond also modulates the transcription factors and associated genes that regulate differentiation in haematopoietic cells. Cystogrit Diamond treatment in HL60 and K562 induced changes in the gene expression levels of CD61, NFE2, CD41 and CCAAT-enhancer-binding proteins α (C/EBPα). Collectively, this study has identified therapeutic potential in Cystogrit Diamond for the treatment of leukemia.

For phytochemical study, Reverse Phase Ultra High Performance Liquid Chromatography (RP-UHPLC) was developed. The study confirms the presence of 5-hydroxy methyl furfural (5-HMF), vanilic acid, ferulic acid, at 270 nm wavelength and bisdemethoxy curcumin, demethoxy curcumin and curcumin analysis at 420 nm wavelength on comparison with the reference standard. Detail RP-UHPLC chromatogram Cystogrit Diamond in pink and reference standard in blue), retention time, and structures are shown in Fig. 1.

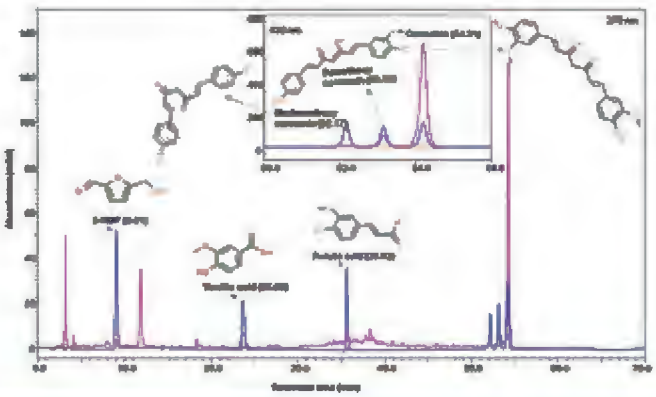


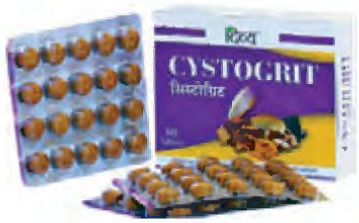
Fig. 1: Ultra High Performance Liquid Chromatography (UHPLC) analysis at 270 nm wavelength and 420 nm wavelength confirms the presence of 5-hydroxy methyl furfural (5-HMF), vanilic acid, ferulic acid, bisdemethoxy curcumin, demethoxy curcumin and curcumin.

Dose and Method of Use of Cystogrit Diamond:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

CYSTOGRIT सिस्टोग्रिट



Introduction to Benign Tumors, Cysts, Abnormal Growth:

Benign tumors are non-cancerous growths that develop in various tissues and organs. Benign tumors, also known as non-cancerous or non-malignant tumors, are abnormal growths of cells that do not invade nearby tissues or spread to other parts of the body. Unlike malignant tumors, benign tumors typically grow slowly. A benign tumor refers to an abnormal growth of cells that does not possess the ability to metastasize or invade surrounding tissues. It originates from a specific type of cell and can develop in various organs and tissues throughout the body.

Benign tumors are categorized based on the cell type from which they arise and the tissues they affect. Common types of benign tumors include adenomas, fibromas, lipomas, and meningiomas, among others. The exact causes of benign tumors are often unknown. However, certain risk factors have been associated with their development. These risk factors may vary depending on the type of benign tumor. Factors such as genetic predisposition, exposure to certain chemicals or radiation, hormonal imbalances, chronic inflammation, and certain hereditary conditions can contribute to the development of benign tumors. The clinical presentation of a benign tumor depends on its location and size. Some benign tumors may remain asymptomatic and are incidentally discovered during routine medical examinations or imaging studies. However, others can produce symptoms due to their mass effect on surrounding tissues or organs. Symptoms may include pain, swelling, changes in bowel or bladder function, abnormal bleeding, or neurological deficits, among others. For instance, a benign brain tumor may cause headaches, seizures, or neurological dysfunction.

Various diagnostic methods are employed to evaluate and diagnose benign tumors. These include imaging techniques such as X-rays, ultrasound, Computed Tomography (CT) scans, Magnetic Resonance Imaging (MRI), and Positron Emission Tomography (PET) scans. The management of benign tumors depends on several factors, including the tumor's size, location, symptoms, potential for growth or complications, and patient preference. In many cases, especially when the tumor is small and asymptomatic, a watchful waiting approach

with regular monitoring may be adopted. If the tumor is causing symptoms or poses a risk to the patient's health, treatment options may include surgical removal, radiation therapy, or medication to control symptoms or inhibit tumor growth.

Surgery is often the preferred treatment for benign tumors, aiming to completely remove the tumor while preserving surrounding healthy tissues. In cases where surgical removal is not feasible or poses significant risks, other treatment options such as radiofrequency ablation, cryotherapy, or embolization may be considered. A cyst is a closed sac-like structure that contains fluid, semi-solid material, or gas. It is surrounded by a distinct membrane or capsule. Cysts can vary in size, from very small to large masses. They are classified based on their location and the tissue from which they originate. Common types of cysts include epidermoid cysts, sebaceous cysts, ovarian cysts, and ganglion cysts, among others.

The development of cysts can have various causes and risk factors. Some cysts are congenital, meaning they are present at birth, while others may develop later in life due to certain factors. These factors can include blockages of ducts or glands, chronic inflammation, hormonal imbalances, trauma, or underlying medical conditions. For example, ovarian cysts can develop as a result of hormonal imbalances during the menstrual cycle. The clinical presentation of a cyst depends on its location, size, and characteristics. Some cysts may remain asymptomatic and are incidentally discovered during routine examinations or imaging studies. However, larger cysts or those causing pressure on surrounding tissues can produce symptoms.

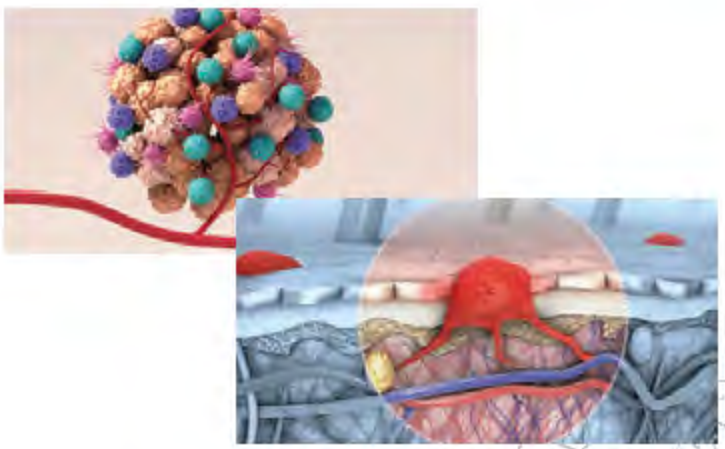
Common symptoms associated with cysts include pain, swelling, tenderness, redness, or changes in the texture of the overlying skin. For instance, a sebaceous cyst in the skin may present as a painless, slowly growing lump beneath the skin surface. Several diagnostic methods are used to evaluate and diagnose cysts. A physical examination may reveal the presence of a cyst based on its characteristic appearance and palpation. Imaging techniques such as ultrasound, CT scans, or MRI may be employed to visualize the size, location, and internal structure of the cyst. Fine-Needle Aspiration (FNA) or biopsy may be performed to collect a sample of the cyst's contents or cells for laboratory analysis, especially when there is uncertainty about the nature of the cyst or suspicion of malignancy. The management of cysts depends on factors such as the type, size, location, symptoms, and patient preference. Treatment options for cysts may vary from conservative measures to surgical intervention. Abnormal growth encompasses a broad range of conditions characterized by the uncontrolled or abnormal proliferation of cells, tissues, or structures. These growths can be categorized into different types based on their characteristics and anatomical location. Some common types of abnormal growth include tumors, polyps, hyperplasia, hamartomas, and dysplasia. The management of abnormal growth depends on factors such as the type, location, size, rate of growth, and presence of symptoms. Treatment options may include surgical removal, radiation therapy, chemotherapy, targeted therapy, immunotherapy, or a combination of these approaches.

Ingredients and Medicinal Uses of Cystogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Kanchnar (Bk.)	*Bauhinia variegata*	Galgand-Granthi Rog Har	• Cures thyrold disorders and tumors	307.02 mg
Haldi (Rz.)	*Curcuma longa*	Shothghna, Vishghna	• Anti-inflammatory • Anti-poisonous	52.63 mg
Fine powder of:				
Shila Sindoor	Classical Preparation	Apachi- Galgand Har	• Cures goitre	35.09 mg
Mukta Shukti Pishti	Classical Preparation	Raktaj Gulm Har	• Alleviates tumors originated due to blood vitiation	70.18 mg
Moti Pishti	Classical Preparation	Daha Shamak, Kanti Vardhak	• Reduces burning sensation • Enhances skin texture	17.54 mg
Tamra Bhasma	Classical Preparation	Kusthaghna	• Can cure skin diseases	17.54 mg

Cystogrit is Useful in:

- **Benign Tumor**
- **Cysts**



Cystogrit: Description in Classical Texts:

Cystogrit has been formulated for treatment of cysts and tumours. Bhava prakasha mentiones Kanchnar under Guduchyadi varga. This drug has astringent taste and light and dry qualities. It has katu vipaka; is cold in potency and pacifies Kapha and pitta doshas. By its prabhav, it is Gandamala nashana,curing thyroid disorders. This drug has the ability to cure tumors located at various parts of the body.

Bhava prakasha has mentioned Haldi/Haridra under Hareetakyadi Varga. It has pungent and bitter tastes. It pocess quality of dryness and is hot in potency. It pacifies kapha pitta doshas. It has anti-inflammatory action. It can cure blood related diseases. It has wound healing potential.

Prepared with purified realgar, purified mercury and purified Sulphur mixed with aloe vera juice and incinerated, shila sindoor is given in aiding management of skin diseases and respiratory illness. Muktashukti pishti is used for various conditions from indigestion to cancer. It has sweet and pungent tastes and is useful in gastritis and other conditions like gastritis.

Moti pishti can alleviate mano doshas. It is prepared by taking mukta bhasma and triturate with rosewater. Tamra bhasma may cure anemia, kapha-pitta roga and skin diseases. It can be administered with Trikatu Kashaya, ghee, honey, durlabha kwath, ardraka rasa or guduchi rasa.

Scientific Evidence of Cystogrit:

Patanjali Research Foundation, have deciphered the therapeutic potential of Cystogrit against leukemia through detailed research work. Differentiation therapy is one of the modalities of treatments wherein leukemia cells are induced to undergo differentiation toward haematopoietic lineage. The study utilized commercially available leukemia derived immortalized cell lines serves as useful in vitro models to screen and study molecules or formulations for their therapeutic properties in leukemia. In this study, the researchers performed experiments with K562 to study chronic myelogenous leukemia, and HL60 cells to study promyelocytic leukemia under the pre-clinal settings. Treatment of Cystogrit in both the cell lines, HL60 and K562 induced morphological changes that could be correlated with the induction of differentiation in the leukemic cell lines. Giemsa staining demonstrated changes in nuclear shape and segmentation of K562 and HL60 cells treated with Cystogrit. Surface membrane proteins, known as cluster of differentiation (CD markers) help biomarkers in assessing differentiation in leukemia cells. In HL60 cells, Cystogrit showed a significant rise of ~ 10 % CD11b and CD14 positive cells. Interestingly, K562 showed a much higher rise compared to HL60. CD11b positive cells increased by ~ 14 % whereas CD41 positive cells increased by ~ 22 %. In addition, Cystogrit also modulated the gene expression levels of CD61, NFE2, CD41 and CCAAT-enhancer-binding proteins α (C/EBPα). Collectively, this study has identified therapeutic potential in Cystogrit for the treatment of leukemia.

Cystogrit tablet was characterized by using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In the analysis of Cystogrit tablet, the different compounds were observed at 270 nm wavelength mainly 5-HMF (9.01 minutes), vanillic acid (23.71 minutes), ferulic acid (35.60 minutes), bisdemethoxycurcumin (52.17 minutes), desmethoxycurcumin (53.15 minutes), and curcumin (54.21 minutes), as shown in Fig. 1. In the chromatograms, the blue line indicates the standards and pink line shows the test sample.

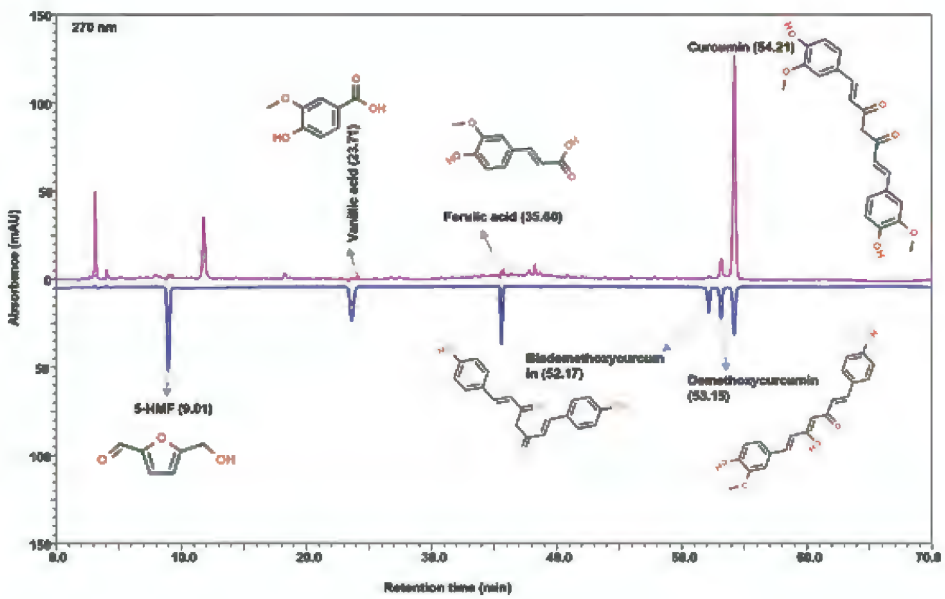


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Cystogrit tablet. In Cystogrit tablet, the compounds were observed mainly 5-HMF (9.01 minutes), vanillic acid (23.71 minutes), ferulic acid (35.60 minutes), bisdemethoxycurcumin (52.17 minutes), desmethoxycurcumin (53.15 minutes), and curcumin (54.21 minutes) at 270 nm wavelength. In the chromatograms, the blue line shows the standards and pink line indicates the test sample.

Dose and Method of Use of Cystogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Capsule

Sea Buckthorn

सी बकथोर्न

Introduction to Immune Boosters, Cardiac Problems, and Psoriasis:

Something that strengthens your immune system is known as an immunity booster. This can involve taking supplements, eating specific foods high in vitamins and minerals, getting enough sleep and exercise, and refraining from activities that can impair your immune systems such as smoking and binge drinking.

Numerous foods can strengthen your immune system. Citrus fruits like oranges and lemons, broccoli, red bell peppers, garlic, ginger, spinach, almonds, and turmeric are just a few of them.

Supplements can assist boost immune function and perhaps offer disease protection in addition to these nutrients. Vitamin C, Vitamin D, Zinc, Elderberry, and Echinacea are some of the greatest supplements to strengthen your immune system.

The term "Cardio-Vascular Diseases" (CVDs) refers to a variety of heart and blood vessel conditions. They comprise rheumatic heart disease, coronary heart disease, cerebrovascular illness, peripheral arterial disease, and more.

The main cause of death in the globe is cardiovascular disease. It is brought on by a number of things, such as high blood pressure, high cholesterol, smoking, obesity, and inactivity.

By engaging in regular exercise, adhering to a nutritious diet, quitting smoking, maintaining a healthy blood pressure, and maintaining normal glucose and LDL cholesterol levels, cardiovascular disease can be prevented. Early detection of cardiovascular disease is crucial in order to start treatment with counselling and medication.

The chronic inflammatory skin condition psoriasis has many phenotypically different subtypes, including plaque, flexural, guttate, pustular, and erythrodermic. It is a chronic skin condition with a clinically diverse presentation, including plaque.

Skin cells typically grow slowly, but in psoriasis, skin cells grow more quickly than usual. The exact cause of psoriasis is unknown.

A persistent skin condition called psoriasis causes patches of scaly, frequently itchy skin. It is an autoimmune condition that develops when immune cells called T lymphocytes, or T

cells, attack healthy skin cells in both the deeper vascular layer and the outer, horny, nonvascular layer of the skin. Plaque psoriasis, also known as psoriasis vulgaris, is the most prevalent form of the skin condition. It is distinguished by firm, slightly raised crimson spots or papules that are scaled in a silvery white color.

Ingredients and Medicinal Uses of Sea Buckthorn:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each Capsule contains
Sea Buckthorn Oil (Sd.)	*Hippophae rhamnoides*	Twachya, Hridya	• Good for skin • Cardiotonic	58.48%

Sea Buckthorn is Useful in:

- **Psoriasis**
- **Cardiac Health**
- **Immunity Booster**

Sea Buckthorn: Description in Classical Texts:

Amlavetasa has sour taste; hot potency and has the qualities of lightness and dryness with amla vipaka. It pacifies vata and kapha doshas and helps improve digestion. It is cardiotonic and promotes strength of the individual.

Scientific Evidence of Sea Buckthorn:

Sea Buckthorn oil (SBKT) shows the anti-inflammatory and anti-psoriatic efficacies which is derived from the fruit pulp of Hippophae rhamnoides. Chemical analysis of the SBKT showed the presence of 16 major saturated, mono-, and polyunsaturated fatty acids components, imparting significant nutritional values.

Analysis of the SBKT by GC–FID technique indiacted the presence of 16 major fatty acid peaks and several other minor peaks (Fig.1A). Saturated fatty acid content howed the highest quantity of fatty acids (57.06%) present in the SBKT, followed by monounsaturated (23.31%) and polyunsaturated (19.64%) fatty acids (Fig. 1B). FAME-based GC–FID analysis

of the SBKT showed the presence of palmitic acids (26.30%), cis-9 oleic acid (13.66%), linoleic acid (9.31%), lignoceric acid (9.16%), myristic acid (8.40%), palmitoleic acid (8.10%), stearic acid (7.45%), tricosanoic acid (1.97%), henicosadienoic acid (1.55%), alpha-linolenic acid 1.53%), heptadecanoic acid (1.31%), butyric acids (1.12%), pentadecanoic acid (0.81%), and arachidic acid (0.54%). Several other fatty acid components were also detected in the SBKT, but their quantities were relatively low (<0.10%).

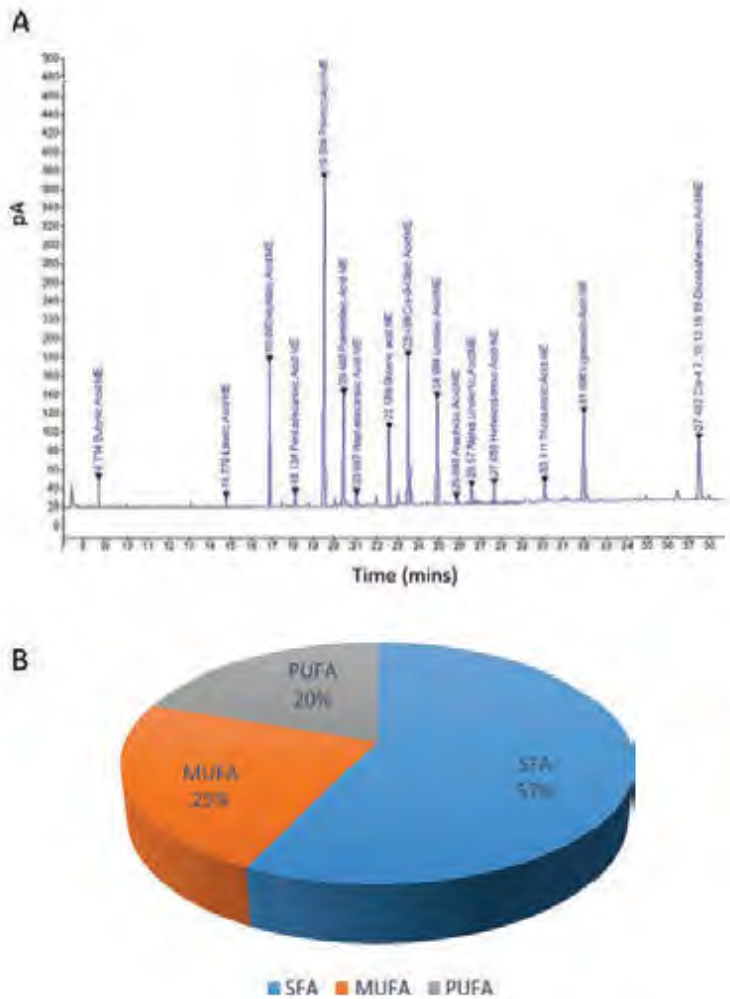


FIG. 1 Gas chromatography–flame ionized detector (GC–FID) chromatogram of Sea Buckthorn oil (SBKT). (A) The fatty acid composition of the SBKT was calculated by using the GC–FID methodology. Individual fatty acids were identified and quantified using fatty acid methyl ester methodology. Chromatography analysis identified 16 major fatty acids. (B) Pie-diagram represents the percentage of 3 categories of fatty acids identified in the SBKT—saturated fatty acids (SFA), monounsaturated fatty acids (MUFA), and polyunsaturated fatty acids (PUFA).

Traditional use of SBKT in reducing gastric ulcers as an anti-inflammatory mediator has been attributed to the modulation of pro-inflammatory mediators. SBKT was found to induce significant ($p < 0.01$) loss of cell viability in the normal THP-1 cells at concentrations ≥25 µl/ml (Fig. 2A). Therefore, 10 µl/ml was taken as the maximum test dose for subsequent in vitro assessments. Analysis of the RNS production in the LPS-stimulated THP-1 cells showed a significant ($p < 0.001$) increase as compared to the normal cells. SBKT treatment of the stimulated THP-1 cells led to a reduction in the cellular RNS levels ($p < 0.01$) in a concentration-dependent manner (Fig. 2B). Treatment of the THP-1 cells with LPS also stimulated the expression of inflammatory NF-κB protein (Fig. 2C). This stirred-up increase in the NF-κB protein expression was ameliorated by SBKT treatment. Increase in the NF-κB protein expression was also associated with a significant increase in the release of the pro-inflammatory cytokines: IL-1β ($p < 0.001$), IL-6 ($p < 0.001$), and TNF-α ($p < 0.001$) (Fig. 2D, E, F). Treatment of the THP-1 cells with SBKT emulsion significantly reduced the LPS-stimulated release levels of IL-1β [5 µl/ml ($p < 0.05$), 2.5 µl/ml ($p < 0.01$), and 1.25 µl/ml ($p < 0.05$)] and IL-6 [5 µl/ml ($p < 0.001$), 2.5 µl/ml ($p < 0.01$), and 1.25 µl/ml ($p < 0.001$)] from the THP-1 cells (Fig. 2D, E). A reducing trend in TNF-α cytokine release in the THP-1 cells treated with SBKT and LPS was observed at 24 h, with a significant reduction occurring at the highest test concentration of the oil (5 µl/ml; $p < 0.01$) (Fig. 2F).

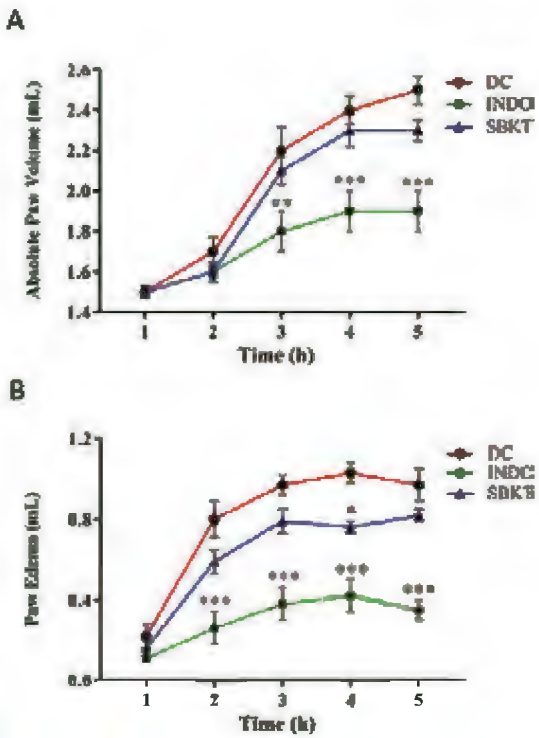


Fig. 2. In vitro anti-inflammatory potentials of the SBKT. (A) Treatment of THP-1 cells with SBKT induced loss of cell viability at concentrations ≥25 µl/ml. Treatment of the lipopolysaccharide (LPS)-stimulated THP-1 cells with the non-cytotoxic doses of SBKT showed amelioration in the production of (B) reactive nitrogen species (RNS) and (C) NF-κB. Downstream reduction in the release of pro-inflammatory cytokines: (D) interleukin-1β (IL-1β), (E) interleukin-6 (IL-6), and (F) tumor necrosis factor-α (TNF-α) was observed in the LPS-stimulated THP-1 cells treated with different concentrations of SBKT. These experiments were performed thrice in triplicates. One-way ANOVA followed by Dunnett's post hoc test was performed to calculate statistical significance. #$p < 0.001$ (LPS-stimulated versus normal control cells); *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (LPS only stimulated cells versus LPS + SBKT-treated cells)

In Vivo Anti-Inflammatory Effects of SBKT Subplantar injection of λ-Carrageenan (0.1 ml of 1% solution in normal saline) in the Wistar rats induced a time-dependent increase in both the absolute paw volume and paw edema (Fig. 3A, B). Post-treatment of the Carrageenan-stimulated Wistar rats with 10 mg/kg of standard anti-inflammatory drug INDO exhibited a significant reduction of absolute paw volume ($p < 0.001$) and paw edema ($p < 0.001$) (Fig. 3A, B). Oral (100 mg/kg: calculated from a human equivalent dose of 2000 mg/day, for rats) and topical (40 µl/paw) treatment of the Carrageenan-stimulated rats with SBKT induced an observable decrease in both the paw absolute volume and paw edema (statistically significant at 4 h; $p < 0.05$), compared to the disease control animals (Fig. 3A, B)

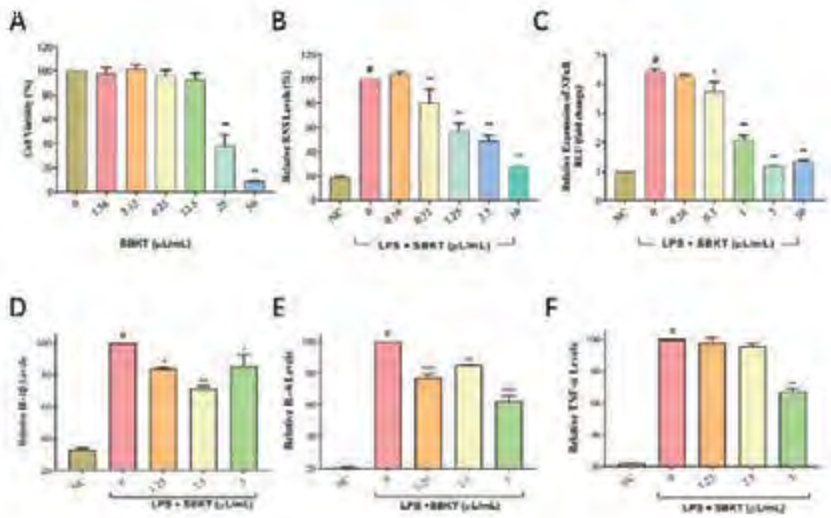


Fig. 3 Effect of SBKT on λ-Carrageenan-induced paw rat edema model. Co-treatment of carrageenan-stimulated Wistar rats with SBKT [100 mg/kg; p.o. and 40 µl topical application (T.A.)] or with INDO (10 mg/ kg; p.o.) led to a considerable reduction in their (A) absolute paw volume and (B) paw edema. Statistical analysis of the treatments was performed using two-way ANOVA followed by Newman–Keuls multiple comparison test (n = 7 animals). *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (DC versus SBKT; DC versus INDO-treated animals). DC, disease control, SBKT, Sea Buckthorn oil; INDO, indomethacin.

TPA formulated in acetone was applied on the CD-1 mouse ear (2.5 µg/ear) for induction of psoriasis-like disease. Topical application of TPA significantly induced ear edema in the control (TPA CON) animals ($p < 0.001$) (Fig. 4A). Topical treatment of the psoriatic ear with the standard anti-inflammatory drug DEXA (0.2 mg/ear) significantly reduced the ear edema from day 2 onward ($p < 0.001$) (Fig. 4A). Similarly, concurrent oral (100 and 200 mg/kg) and topical (20 µl) treatment of the SBKT in the psoriatic animals significantly reduced ear edema from day 2 onwards. In these test parameters, no significant variation in the responses was observed in the animals treated with 100 and 200 mg/kg-dose of SBKT. For mice, 200 mg/kg is the calculated human equivalent dose (2000 mg/day), as per body weights and surface area

conversions. The percent inhibition (at D-10) in the ear edema of DEXA and SBKT 100 and 200 mg/kg treated mice was found to be 70.05 ± 6.25%, 34.05 ± 7.65%, and 30.45 ± 8.90%, respectively, in comparison to TPA CON mice (Fig. 4B).

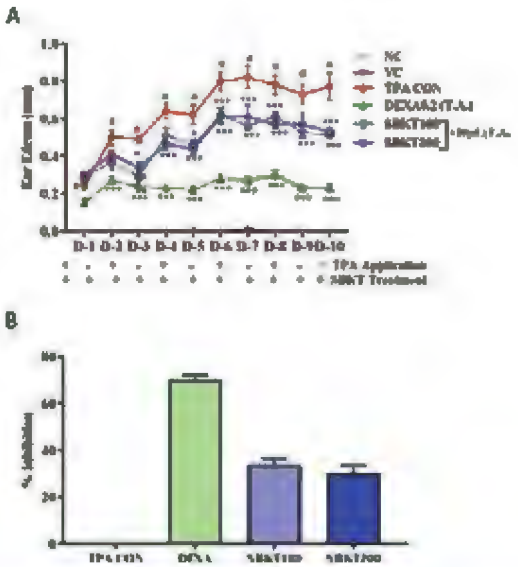


Fig. 4 Effect of SBKT on TPA-induced ear edema in mice. (A) Co-treatment of the TPA-stimulated psoriatic ear (TPA CON) with SBKT (100 and 200 mg/kg; p.o. and 20 µl T.A.) or with DEXA (0.2 mg/ear; T.A.) significantly reduced ear edema. (B) Represents percent ear edema inhibition (activity) calculated in comparison to TPA CON animals at D10. This panel represents % inhibition (activity) of SBKT 100, SBKT 200, and DEXA individually. Statistical analysis was performed using two-way ANOVA followed by Newman–Keuls multiple comparison test (n = 8 animals). #p < 0.001 (NC versus TPA CON); NS p > 0.05 (NC versus VC) *p < 0.05, **p < 0.01, ***p < 0.001 (TPA CON versus SBKT; TPA CON versus DEXA). NC, normal control; VC, vehicle control; TPA CON, 12-O-tetradecanoyl phorbol-13-acetate; DEXA, dexamethasone; SBKT, Sea Buckthorn oil

Dose and Method of Use of Sea Buckthorn:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

DERMAGRIT डर्माग्रिट

Introduction to Skin Diseases:

Nearly one-third of the world's population is affected by skin illnesses, which rank as the fourth most common cause of all human diseases. Despite their widespread occurrence, the burden of skin diseases is sometimes overlooked. In 2013, skin conditions contributed 1.79% to the total global burden of disease, measured across 306 diseases and injuries.

Some of the most common skin disorders include acne, a prevalent global skin issue affecting people of all ages. It is estimated that acne affects around 9.4% of the global population, resulting from clogged hair follicles with oil and dead skin cells. Eczema, also known as dermatitis, is a chronic inflammatory skin disorder causing dry, itchy, and red patches of skin. Various factors, such as allergies, irritants, and genetic factors, contribute to its development. Eczema has a global prevalence of approximately 15-20% among children and about 1-3% among adults, with variations across regions and populations.

Psoriasis, a long-term autoimmune condition, results in thick, scaly patches of red and swollen skin. Its global prevalence rate is 2-3%, varying among countries and ethnic groups. Rosacea is a long-term skin disorder mainly affecting the face, leading to redness, visible blood vessels, and pimple-like lumps. It is estimated to affect around 1-10% of the population, more common in fair-skinned individuals between the ages of 30 and 50.

A skin inflammatory condition, with causes including allergies, irritants, or exposure to specific chemicals, may cause skin irritation, itching, and redness. The prevalence rates vary, but it is estimated to affect around 20% of the general population. Another skin ailment, characterized by itchy, raised welts or pimples erupting unexpectedly on the skin, is hives. The prevalence of chronic urticaria (hives lasting for more than six weeks) is estimated to be around 1% globally, while acute urticaria (hives lasting less than six weeks) is more common, affecting up to 20% of the population at some point in their lives.

Vitiligo, a disorder resulting in white patches of skin due to the loss of melanin, affects about 0.5-2% of the global population. It is more prevalent in certain ethnic groups, with higher rates seen in populations with darker skin tones. In addition to an exhaustive list of various skin disorders, they are often accompanied by a range of physical, emotional, and social challenges, including symptoms such as itching, pain, redness, inflammation, dryness, or scaling. The physical discomforts can be persistent and affect a person's quality of life,

sleep, and daily activities. Alongside these, there are numerous psychological impacts on the affected population, leading to feelings of embarrassment, self-consciousness, low self-esteem, and depression.

Managing skin disorders can impose a financial burden on individuals and families, including expenses for medical consultations, prescription medications, over-the-counter treatments, specialized skincare products, and potential costs related to missed work or reduced productivity. Some skin disorders, such as psoriasis or atopic dermatitis, have been linked to other health conditions like arthritis, cardiovascular diseases, or mental health disorders. These additional health complications can further impact a person's well-being and require additional medical care. Individuals with skin disorders need to seek proper medical care, support, and education to manage their condition effectively. Numerous modern treatments are available, differing according to the particular problem and its severity. Typical management strategies for skin conditions include:

Topical Medications: Many skin disorders are treated with topical medications, applied directly to the affected area. These can include corticosteroids, retinoids, antibiotics, antifungals, or immunomodulators. Topical treatments help reduce inflammation, control symptoms, fight infections, or promote healing. Oral Medications: In some cases, oral medications may be prescribed to treat skin disorders. These can include antibiotics, antifungals, antihistamines, immunosuppressants, or oral retinoids. Oral medications are often used for severe or systemic conditions that require a broader approach to treatment.

Phototherapy: This involves exposing the skin to specific wavelengths of Ultra-Violet (UV) light to treat skin disorders such as psoriasis, vitiligo, or eczema. This treatment can help slow down skin cell growth, reduce inflammation, and improve the appearance of the skin.

Biologic Therapies: These are advanced treatments that target specific molecules involved in the immune response, used for certain autoimmune skin disorders like psoriasis or atopic dermatitis. Biologics are usually administered by injection or infusion and work by suppressing the immune system or targeting specific inflammatory pathways.

Laser Therapy: Utilizing concentrated beams of light to treat various skin conditions such as acne scars, birthmarks, vascular lesions, or unwanted hair. Different types of lasers are used based on the specific skin disorder and desired outcome.

Cryotherapy: Using extremely cold temperatures, often with liquid nitrogen, to freeze and destroy abnormal skin cells or lesions. It is commonly used to treat warts, actinic keratoses, or certain types of skin cancer. Surgical Procedures: In some cases, surgical procedures may be necessary to treat certain skin disorders, such as removing skin cancers, cysts, or scar revision surgeries. Surgical options vary depending on the specific condition and its extent.

Complementary approaches like emollients, moisturizers, proper skincare routines, and lifestyle modifications are often recommended to support the overall management of skin disorders. These can help maintain skin hydration, protect the skin barrier, and minimize

triggers or irritants. Despite the availability of different treatment choices suited to the intricacy of the problem, these treatments may have a wide range of negative health impacts on the patient. For example:

Topical Corticosteroids: These can cause skin thinning, skin discoloration, acne, or increased hair growth at the application site.

Oral Retinoids (e.g., Isotretinoin): Side effects may include dry skin, dry eyes, increased sensitivity to sunlight, muscle and joint pain, and elevated blood lipid levels. More serious side effects can occur, such as birth defects, depression, and liver abnormalities, requiring careful monitoring.

Biologic Therapies: Side effects can include injection-site reactions, flu-like symptoms, increased risk of infections, or rare but severe adverse events like allergic reactions or malignancies.

Phototherapy: May lead to temporary redness, dryness, itching, or sunburn-like reactions of the treated skin. Long-term or excessive exposure to UV radiation may increase the risk of skin aging and skin cancer.

Laser Therapy: Can cause temporary redness, swelling, bruising, blistering, or changes in skin pigmentation. Rarely, more serious complications like scarring, infection, or skin texture changes may occur.

It's essential for individuals undergoing these treatments to be aware of potential side effects and for healthcare professionals to provide thorough monitoring and guidance throughout the treatment process.

Ingredients and Medicinal Uses of Dermagrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Panvad (Sd.)	*Cassia tora*	Kandughna, Charmavikar Har	• Anti-itching • Cures skin diseases	28 mg
Daruhaldi (Rt./St. Wd.)	*Berberis aristata*	Twakvikar Har, Vranaghna	• Cures skin diseases • Wound-healing	28 mg
Karanja (Sd.)	*Caesalpinia bonducella*	Kushtaghna, Rakta Dosh Har	• Cures skin diseases • pacifies vitiated blood	28 mg
Amla (Fr.)	*Emblica officinalis*	Tridosha Har, Mriduvirechak	• Pacifies all 3 doshas • mild laxative	28 mg
Giloy (St.)	*Tinospora cordifolia*	Tridosha Har, Rakta Vicar Har	• Pacifies all three doshas • Cures blood diseases	28 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
ShodhitBakuchi (Sd.)	*Psoralea coryfolia*	Kushtaghna, Rakta Dosh Har	• Cures skin diseases • Pacifies vitiated blood	28 mg
Baheda (Ft. Rd.)	*Terminalia bellerica*	Bhedak, Kushtaghna	• Cures skin diseases	28 mg
Haldi (Rz.)	*Curcuma longa*	Twak Dosh Har, Vishaghna	• Cures skin diseases • Anti-toxic	28 mg
Khair (St. Wd.)	*Acacia catechu*	Kushtaghna, Raktashodhak	• Cures skin diseases • Purifies blood	28 mg
Neem (Lf.)	*Azadirachta indica*	Pratidushak, Twak Raktavikar Har	• Cures diseases of skin and blood	28 mg
Manjishta (Rt.)	*Rubia cordifolia*	Vranashodhak-Ropak, Rakta Dosh Har	• Wound cleansing and healing • pacifies vitiation of blood	28 mg
Chirayata (Wl. Pl.)	*Swertia chirata*	Sarak, Rakta Dosh Har, Kushtaghna	• Expectorant, Pacifies vitiation of blood • Cures skin diseases	28 mg
Harad (Fr. Rd.)	*Terminalia chebula*	Tridoshhar, Twakvikar Har	• Pacifies all three doshas • Cures skin diseases	28 mg
ChotiKateli (Fr.)	*Solanum surattens*	Rechak, Kandughna	• Laxative • Anti-itching	28 mg
Devdaru (St. wd.)	*Cedrus deodara*	Rakta Dosh Har, Kandughna	• Pacifies vitiation of blood • Anti-itching	28 mg
Amaltas (Wl. Fr.)	*Cassia fistula*	Kushtashodhak, Kushtaghna	• Clears skin diseases	28 mg
Fine Powder of:				
Kutki (Rz.)	*Picrorhiza kurroa*	Bhedak, RaktaVikar Har	• Pacifies diseases of blood	26 mg
Kali jeeri (Sd.)	*Centratherum anthelminticum*	Kushtaghna, RaktaVikar Har	• Cures skin diseases	26 mg

Dermagrit is Useful in:

- **Skin Diseases**
- **Eczema**
- **Dermatitis**
- **Rashes/ Itching**
- **Skin Allergies**

Dermagrit: Description in Classical Texts:

Dermagrit tablet has been prepared by using traditional Ayurvedic drugs effective in skin diseases. Panvadis mentioned by Bhava prakasha under hareetakyadivarga. This drug is called Cakramarda in Ayurveda. It is sweet in taste and has dry quality. It is cool in potency. It has katuvipaka. This drug pacifies kapha dosha. It cures skin diseases and is ani-toxic. Daruhaldi called Daruharidra in Ayurveda is categorized under Hareeakyadivarga by Bhava prakasha. This drug has bitter and astringent tastes. It has the qualities of dryness and lightness. It has hot potency. This drug has katuvipaka and pacifies kapha pitta doshas.

Bhava prakasha has placed Karanjain GuduchyadiVarga. Ithas pungent taste and pocess sharp quality. This drug has hot potency. It has katuvipaka. It pacifies Kapha dosha. It cures skin diseases. Amla is placed under Hareetakyadivarga in Bhava prakasha. It has sweet, bitter, astringent, sour and pungent tastes. Sour is the most prominent taste. It has Madhuravipaka. It is cold in potency and can pacify all three doshas. It also has rejuvenating activity.

Giloy is mentioned in Ayurveda by many names like Guduci, Amrita, Madhuparni etc. it has pungent, astringent and bitter tastes, and is light in quality. It has madhuravipaka. It is hot in potency. It has a rejuvenating action and pacifies all three doshas. It can cure different skin diseases.Bakuchi is mentioned by Bhava prakasha under HareetakyadiVarga. It has sweet and pungent tastes. It is dry and light in quality. Its vipaka is katu. It has rejuvenative activity and pacifies kapha pitta doshas. This drug gives good results in treatment of skin diseases. It is very good for healthy skin.

Baheda called as Bibheetaka in Ayurveda is mentioned in Bhava prakasha – Hareetakyadivarga. It has astringent taste with madhuravipaka. It pacifies kapha and pitta doshas. It is hot in potency, but cool to touch. It has the qualities of dryness and roughness. Haldi /Haridra has been mentioned in Bhava prakasha under Hareetakyadi varga. It has pungent and bitter tastes. It is dry in quality and hot in potency. It pacifies kapha pitta doshas. It has anti-inflammatory action. It has wound healing potential. Haldi can pacify any vitiation

occurring on the skin.

Khair/Khadira is mentioned in Bhava prakasha under Vatadivarga. It has bitter and astringent tastes. This is cold in potency and has light and dry qualities. the vipaka is katu. It pacifies kaphapittadoshas. Khadira has the ability to maintain a normal level of lipids. It cures various skin diseases and vitiligo. Neem/Nimba is mentioned under Guducyadivarga in Bhava prakasha. It has bitter astringent tastes, light and dry qualities. It has a cold potency and its vipaka is katu. It pacifies kapha and pitta doshas. This drug is well known for its efficacy in curing various skin diseases.

Manjishta has bitter, astringent and sweet tastes. It has the qualities of heaviness and dryness. It has katuvipaka.the drug is hot in potency. This drug can pacify all three doshas, mainly the pitta dosha. It has anti-inflammatory action and can cure skin diseases. Chirayata/ Kiratatikta is mentioned in Bhava prakasha under Hareetakyadivarga. Chirayata has dry and light qualities. It has bitter taste. This drug is hot potency. It pacifies kapha and pitta doshas. Harad/Hareetaki is the first drug mentioned in Hareetakyadivarga by Bhava prakasha. It has sweet, pungent, sour, astringent and bitter tastes in it. It is dry in quality and hot in potency. It has madhuravipaka. This drug is a known rejuvenating drug. It acts against skin diseases. ChotiKateli/Kantakari is mentioned under Guduchyaivarga in Bhava prakasha. It has pungent and bitter tastes. It is dry and light in quality. It has hot potency. This drug pacifies kapha vata doshas. This drug has anti-inflamatory action, and cures itching.

Devdaru is mentioned under Karpooradivarga in Bhava prakasha. It has bitter taste and qualities of lightness and unctuousness. It has hot potency. This drug has anti-inflammatory and anti-itching activity. Amaltas/Aragwadhais sweet in taste. It has madhuravipaka. It has cold potency. It has Madhuravipaka. It has he qualities of softness, heaviness and unctuousness. It pacifies kapha and pitta doshas and acts as a mild laxative also.

Kutki is having bitter taste and qualities of dryness and lightness. It is cold in potency with katuvipaka. This drug pacifies kapha pitta doshas. Kali jeeri is having astringent and pungent tastes. It has qualities of lightness and sharpness. It has katuvipaka and it is hot in potency. This drug pacifies kapha and vata doshas.

Scientific Evidence of Dermagrit:

Analysis of Dermagrit by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector technique confirmed the presence of different marker compounds mainly gallic acid; 5-Hydroxy methyl furfural (5-HMF), protocatechuic acid, methyl gallate, corilagin, ellagic acid, cinnamic acid at 270 nm wavelength and bisdemethoxy curcumin, demethoxycurcumin, curcumin at 420 nm wavelength. In the chromatograms, the blue line represents standards and the pink line represents the test sample, as shown in Fig. 1.

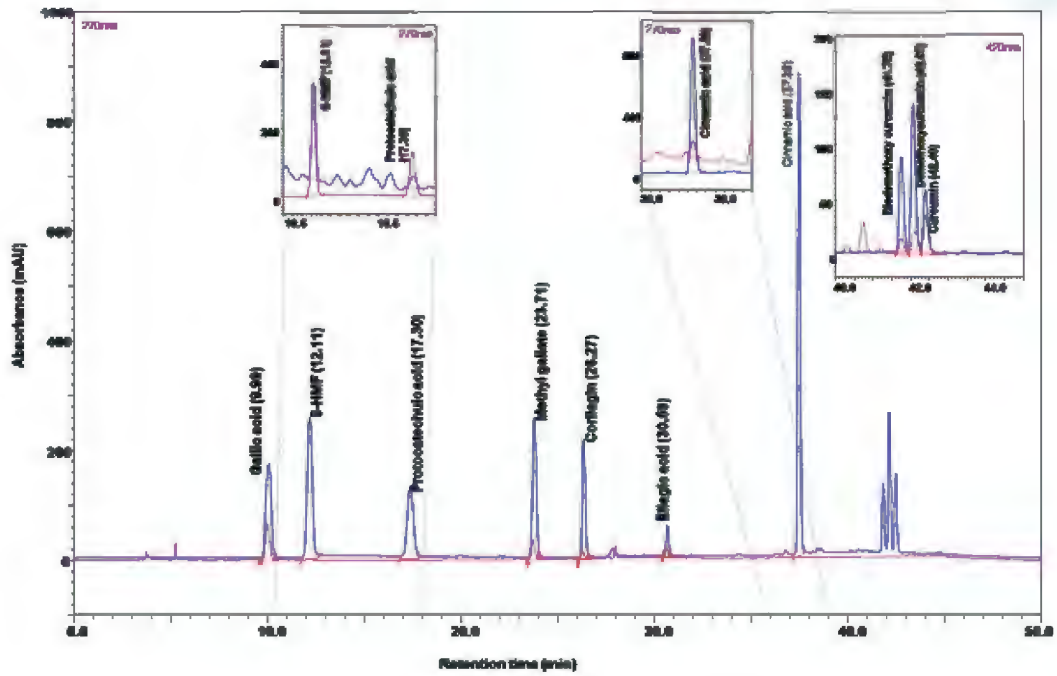


Fig. 1. : Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Dermagrit. In Dermagrit, the different compounds were observed mainly gallic acid at 9.99 minutes, 5-Hydroxy methyl furfural (5-HMF) 12.11 minutes, protocatechuic acid 17.30 minutes, methyl gallate 23.71 minutes, corilagin 26.27 minutes, ellagic acid 30.59 minutes, cinnamic acid 37.39 minutes at 270 nm wavelength and bisdemethoxy curcumin 41.75 minutes, Demethoxycurcumin 42.07 minutes, Curcumin 42.20 minutes at 420 nm wavelength. In the chromatograms, the blue line represents standards and the pink line represents the test sample.

Dose and Method of Use of Dermagrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

DERMAGRIT LEP डर्माग्रिट लेप

Introduction to General Skin Disorders:

Nearly one-third of the world's population is affected by skin illnesses, which are the fourth most common cause of all human diseases. Despite their widespread appearance, the burden of skin diseases is sometimes overlooked. In 2013, skin conditions contributed 1.79% to the total global burden of disease measured across 306 diseases and injuries. Some of the most commonly occurring skin disorders are:

Acne, is one of the most common skin disorders globally, and affecting people of all ages. It is estimated that acne affects around 9.4% of the global population. It occurs when the hair follicles become clogged with oil and dead skin cells.

Eczema, also referred to as dermatitis, is a chronic inflammatory skin disorder that causes dry, itchy, and red patches of skin. Numerous things, such as allergies, irritants, and genetic factors, can contribute to its development. Eczema has a global prevalence of approximately 15-20% among children and about 1-3% among adults. The prevalence varies across regions and populations.

Psoriasis, a long-term autoimmune condition that results in thick, scaly patches of skin that are red and swollen. It can affect any bodily region and is frequently accompanied by discomfort or itching. Its prevalence rate is 2-3% globally. The prevalence can vary among different countries and ethnic groups.

Rosacea: A long-term skin disorder that mostly affects the face and results in redness, visible blood vessels, and lumps that resemble pimples. Rosacea can eventually cause the skin to thicken and irritate the eyes. It is estimated to affect around 1-10% of the population, depending on the region. It is more common in fair-skinned individuals and often occurs between the ages of 30 and 50.

Dermatitis: A skin inflammatory condition that has a variety of causes, including allergies, irritants, or exposure to specific chemicals. It may cause skin irritation, itching, and redness. The prevalence rates vary, but it is estimated to affect around 20% of the general population.
Urticaria (Hives): A skin ailment characterized by itchy, raised welts or pimples that erupt unexpectedly on the skin. Allergies, infections, medicines, and other reasons can cause hives. The prevalence of chronic urticaria (hives lasting for more than six weeks) is estimated to be around 1% globally. Acute urticaria (hives lasting less than six weeks) is more common and can affect up to 20% of the population at some point in their lives.

Vitiligo: A disorder in which white patches of skin appear as a result of the skin losing its color. It happens when the cells that make melanin, the pigment that gives the skin its color, are destroyed. Vitiligo affects about 0.5-2% of the global population. It is more prevalent in certain ethnic groups, with higher rates seen in populations with darker skin tones.

In addition to an exhaustive list of various skin disorders, they are often accompanied with a range of physical, emotional, and social challenges. These issues may include symptoms such as itching, pain, redness, inflammation, dryness, or scaling. The physical discomforts can be persistent and affect a person's quality of life, sleep, and daily activities. Along with these, there are numerous psychological impacts on the affected population. They may experience feelings of embarrassment, self-consciousness, low self-esteem, and depression. Managing skin disorders can impose a financial burden on individuals and families. Expenses may include medical consultations, prescription medications, over-the-counter treatments, specialized skincare products, and potential costs related to missed work or reduced productivity. Some skin disorders, such as psoriasis or atopic dermatitis, have been linked to other health conditions like arthritis, cardiovascular diseases, or mental health disorders. These additional health complications can further impact a person's well-being and require additional medical care. Individuals with skin disorders need to seek proper medical care, support, and education to manage their condition effectively.

There are numerous modern treatments available, and they differ according to the particular problem and how severe it is. The following are some typical management strategies for skin conditions:

Topical Medications: Many skin disorders are treated with topical medications, which are applied directly to the affected area. These can include corticosteroids, retinoids, antibiotics, antifungals, or immunomodulators. Topical treatments help reduce inflammation, control symptoms, fight infections, or promote healing. Oral Medications: In some cases, oral medications may be prescribed to treat skin disorders. These can include antibiotics, antifungals, antihistamines, immunosuppressants, or oral retinoids. Oral medications are often used for severe or systemic conditions that require a broader approach to treatment.

Phototherapy: Phototherapy involves exposing the skin to specific wavelengths of ultraviolet (UV) light to treat skin disorders such as psoriasis, vitiligo, or eczema. This treatment can help slow down skin cell growth, reduce inflammation, and improve the appearance of the skin.

Biologic Therapies: Biologic therapies are advanced treatments that target specific molecules involved in the immune response. They are used for certain autoimmune skin disorders like psoriasis or atopic dermatitis. Biologics are usually administered by injection or infusion and work by suppressing the immune system or targeting specific inflammatory pathways.

Laser Therapy: Laser therapy utilizes concentrated beams of light to treat various skin conditions such as acne scars, birthmarks, vascular lesions, or unwanted hair. Different types of lasers are used based on the specific

skin disorder and desired outcome.

Cryotherapy: Cryotherapy involves using extremely cold temperatures, often with liquid nitrogen, to freeze and destroy abnormal skin cells or lesions. It is commonly used to treat warts, actinic keratoses, or certain types of skin cancer.

Surgical Interventions: In some cases, surgical procedures may be necessary to treat certain skin disorders, such as removing skin cancers, cysts, or scar revision surgeries. Surgical options vary depending on the specific condition and its extent.

Supportive Therapies: Complementary approaches like emollients, moisturizers, proper skincare routines, and lifestyle modifications are often recommended to support the overall management of skin disorders. These can help maintain skin hydration, protect the skin barrier, and minimize triggers or irritants.

Despite the fact that there are many different treatment choices available that are suited to the intricacy of the problem, these treatments may have a wide range of negative health impacts on the patient. Topical Corticosteroids can cause skin thinning, skin discoloration, acne, or increased hair growth at the application site. Oral Retinoids (e.g., Isotretinoin) side effects may include dry skin, dry eyes, increased sensitivity to sunlight, muscle and joint pain, and elevated blood lipid levels. More serious side effects can occur, such as birth defects, depression, and liver abnormalities, requiring careful monitoring. Biologic Therapies can include injection-site reactions, flu-like symptoms, increased risk of infections, or rare but severe adverse events like allergic reactions or malignancies. Phototherapy can lead to temporary redness, dryness, itching, or sunburn-like reactions of the treated skin. Long-term or excessive exposure to UV radiation may increase the risk of skin aging and skin cancer. Laser Therapy can cause temporary redness, swelling, bruising, blistering, or changes in skin pigmentation. Rarely, more serious complications like scarring, infection, or skin texture changes may occur.

Ingredients and Medicinal Uses of Dermagrit lep:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Fine Powder of:				
Nagarmotha (Rz.)	*Cyperus scariosus*	Kandughna, Jantughna	• Alleviates itching • Anti-microbial	5 g
Madanfal (Fr.)	*Randia dumetorum*	Pidika Har	• Alleviates boils	5 g
Amla (Fr.)	*Emblica officinalis*	Twachya	• Good for skin	5 g
Harad (Fr. Rd.)	*Terminalia chebula*	Vran Ropak	• Wound healing	5 g

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Baheda (Fr. Rd.)	*Terminalia bellirica*	Kandughna, Dahashamak	• Alleviates itching • Alleviates burning sensation	5 g
Karanj (Sd.)	*Caesalpinia bonducella*	Sthanic Shoth Har, Vranghna	• Anti-inflammatory • Wound healing	5 g
Amaltas (Fr. Pp.)	*Cassia fistula*	Vran Shoth Har	• Wound healing • Anti-inflammatory	5 g
Indrayav (Sd.)	*Holarrhena antidysenterica*	Sransan, Rodhak, Durgandh Nashak	• Laxative, • Wound healing, • Alleviates foul smell	5 g
Daruhaldi (Rt./St Bk.)	*Berberis aristata*	Charma Vikar Har	• Cures skin diseases	5 g
Chatiban (Br.)	*Alstonia scholaris*	Jeerna Vran Har	• Heals chronic wounds	5 g
Thuhar (St.)	*Euphorbia nerifolia*	Vranghna	• Wound healing	10 g
Neem (Lf.)	*Azadiarachta indica*	Vran Shodhak, Ropak	• Wound healer	10 g
Sirisha (Bk.)	*Albizzia lebback*	Vishghna	• Anti-poisonous	10 g
Mehandi (Lf.)	*Lawsonia inermis*	Sthanik Daha Shamak, Twak Dosh Har	• Alleviates burning sensation • Cures skin diseases	10 g
Geru	Classical Preparation	Sransan, Rodhak, Sthanik Daha Shamak	• Laxative, • Wound healing, • Alleviates localized burning sensation	10 g

Dermagrit Lep is Useful in:

- **General Skin Disorders**
- **Skin Soothening**

Dermagrit Lep: Description in Classical Texts:

It is an Ayurvedic proprietary medicine containing following ingredients which are good in skin diseases.

Nagarmotha, which comes under the kapuraadi varga in bhavprakash nighantu; is pungent, bitter, astringent in taste. This drug is cold

in potency, pacifies pitta and kapha doshas, and can alleviate blood diseases, thirst, fever, anorexia worm infestation.

Madanfal is sweet, and pungent in taste. The physical property is lightness and dryness. This drug is hot in potency and pacifies kapha dosha. It can cure abscess, ulcer, common cold, cough, leprosy, tympanitis, edema, abdominal tumor.

Amla is sweet, sour, astringent in taste, having cold potency; pocess the property of heavyness and madhur vipaka. It pacifies vata, pitta & kapha doshas and is especially indicated in bleeding diathesis & diabetes insipidus. It cures skin disease, edema, malabsorption, diseases of liver and spleen.

Harad is sweet, sour, pungent, bitter, astringent in taste, and hot potency. It has light and dry properties, with madhura vipaka. It is an appetizer, pacifies vata; and alleviates diabetes insipidus, skin disease, edema and diseases of liver.

Baheda is astringent in taste, and hot in potency. It has lightness and dryness properties with madhur vipaak. This herb pacifies pitta and kapha doshas and acts as laxative & anti-tussive.

Karanj is pungent in taste. The physical property is dryness and sharpness. It has hot potency, thereby pacifying kapha dosha. This drug is helpful in skin diseases, vaginal diseases, flatulence, abdominal tumor, ulcer etc.

Amaltas; with its sweet taste and cold potency, has heavy quality and madhur vipaka. It pacifies pitta and kapha doshas, acts as a laxative, and is helpful in management of fever, colic and diseases caused by vitiation of vata.

Indrayav is pungent, astringent, in taste, having the quality of dryness with cold potency. It pacifies pitta and kapha doshas and acts like an appetizer. This herb can alleviate skin diseases, hemorrhoids, thirst, diarrhea. indigestion.

Daruhaldi is pungent, bitter in taste with hot potency having the quality of dryness. It pacifies pitta dosha and is useful in managing throat diseases, eye and ear ailments. Chatiban is astringent in taste and has unctous property with hot potency. It pacifies vata and kapha doshas and acts as an appetizer, laxative. This drug can alleviate skin diseases, blood diseases and abdominal tumor.

Thuhar has sharp property, hot potency and pacifies kapha and vata doshas. It acts like a laxative and appetizer; helping in management of enlarged prostate, colon diseases. Neem has cold potency It pacifies vata, pitta, kapha doshas. It has katu vipaka.& light Property. It acts as an astringent. It cures skin diseases, nausea, polyuria, fatigue, thirsty, cough, fever, anorexia, ulcer, worm infestation.

Sirisha; It is sweet, bitter, astringent in taste. It has hot potency. It pacifies vata, pitta, kapha dosha. It can cure edema, erysipels, cough, ulcer, poisoning. Mehandi is bitter astringent in taste with qualities of dryness and lightness; cold potency and katu vipaka. It pacifies kapha and pitta doshas. Geru is laxative, wound healing, and alleviates localized burning sensation.

Scientific Evidence of Dermagrit Lep:

To evaluate the phytochemical constituents of Delmagrit Lep, reverse phase High Performance Liquid Chromatography (HPLC) analysis was performed targeting polar compounds. As shown in Fig. 1 analytical study confirmed the presence of gallic acid, methyl gallate, corilagin, chebulegic acid, ellagic aicd, and chebulinic acid in Dermagrit Lep. The blue chromatogram represents the reference standard and pink chromatogram represents Dermagrit lep. The compounds identified in the lep confirms that the product is rich in polyphenols which are useful for skin problems.

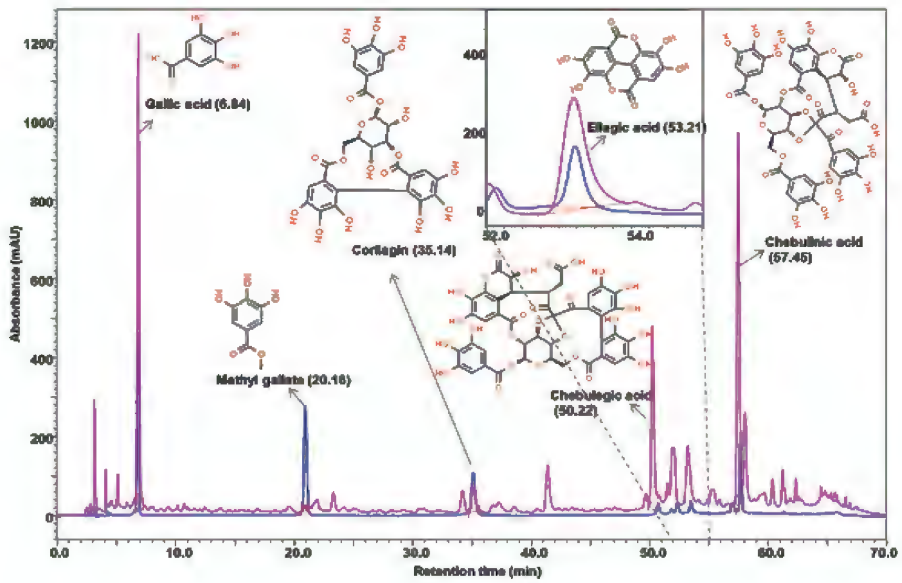


Fig 1: High Performance Liquid Chromatography (HPLC) analysis shows the presence of gallic acid, methyl gallate, corilagin, chebulegic acid, ellagic acid, and chebulinic acid. Blue chromatogram represents the reference standard and pink chromatogram represents Dermagrit Lep, molecular structure and retention times are shown.

Dose and Method of Use of Dermagrit Lep:

As directed by the physician.

Capsule

Divya Capsule
दिव्य कैप्सूल

Introduction to General Skin Disorders:

General skin disorder refers to any condition or disease that affects the skin. There are numerous types of skin disorders, each with its causes, symptoms, and treatments. Acne occurs when the hair follicles become clogged with oil and dead skin cells. Eczema, also referred to as dermatitis, is a chronic inflammatory skin disorder that causes dry, itchy, and red patches of skin. Various fungal infections can affect the skin, including ringworm, athlete's foot, and nail fungus. Psoriasis can affect any bodily region and is frequently accompanied by discomfort or itching. A long-term skin disorder that mostly affects the face and results in redness, visible blood vessels, and lumps that resemble pimples. Fungal infections are caused by different types of fungi and can cause itching, redness, and scaling. Warts are caused by the human papillomavirus (HPV), warts are small, rough growths that can appear on any part of the body. They are contagious and can spread through direct contact. Cold sores, also known as fever blisters, cold sores are caused by the herpes simplex virus. They usually appear as fluid-filled blisters around the mouth or lips. Dermatitis may cause skin irritation, itching, and redness.

Skin disorders can have both physical and emotional challenges for individuals. Here are some common challenges associated with skin disorders. Itching and Discomfort, Pain and Sensitivity, Scarring and Disfigurement, Functional Limitations, Emotional and Psychological Challenges, Self-esteem and Body Image Issues.

In some cases, oral medications may be prescribed to treat skin disorders. These can include antibiotics, antifungals, antihistamines, immunosuppressants, or oral retinoids. Oral medications are often used for severe or systemic conditions that require a broader approach to treatment. There are several oral treatments available in modern medicine for various skin diseases. The specific medication prescribed will depend on the type and severity of the skin condition. Oral antibiotics, such as tetracycline, doxycycline, or erythromycin, are often prescribed for acne treatment. They work by reducing bacteria on the skin and decreasing inflammation. Immunosuppressive medications, like methotrexate or cyclosporine, are prescribed for autoimmune skin conditions, such as psoriasis or eczema, that are resistant to other treatments. These medications work by suppressing the immune system's response. Oral antihistamines, such as cetirizine or loratadine, can be used to relieve itching associated with various skin conditions, including hives or allergic reactions. Disease-Modifying Antirheumatic Drugs (DMARDs) such as methotrexate or azathioprine, may be prescribed for certain autoimmune skin

disorders like pemphigus or lupus. These medications help to modify the immune response and reduce inflammation. Janus Kinase (JAK) inhibitors, such as tofacitinib or ruxolitinib, are newer oral medications approved for certain autoimmune skin conditions like alopecia areata or eczema. They work by inhibiting specific enzymes involved in the immune response.

Oral treatment therapy for skin diseases, such as severe cases of acne, psoriasis, or eczema, may involve the use of medications. While these medications can be effective in managing the skin condition, they can also have potential side effects.

Gastrointestinal Issues: Some oral medications can cause gastrointestinal disturbances, such as nausea, vomiting, diarrhoea, or stomach upset. These side effects may be temporary and resolve as the body adjusts to the medication.

Dryness and Dehydration: Certain oral medications can cause dryness of the skin, lips, and mucous membranes. It's important to stay well-hydrated and use moisturizers or lip balms to alleviate these effects.

Photosensitivity: Some medications can increase sensitivity to sunlight, leading to a higher risk of sunburn or rashes when exposed to the sun. It's crucial to take appropriate sun protection measures, such as wearing sunscreen and protective clothing.

Liver Toxicity: Certain oral medications may have the potential to affect liver function. Regular monitoring of liver enzymes may be necessary to ensure the medication is not causing any harm to the liver.

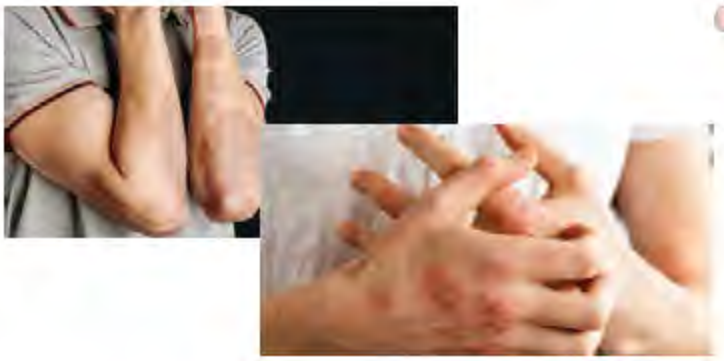
Immunosuppression: In cases where oral medications work by suppressing the immune system, there may be an increased risk of infections. It's essential to be vigilant for signs of infection and promptly report any concerns to the healthcare provider.

Ingredients and Medicinal Uses of Divya Capsule:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Oil of:				
Ashwagandha (Sd.)	*Withania somnifera*	Sthanik Shoth Har, Vatik Rog Har	• Anti-inflammatory action	75 mg
Sea Buckthorn (Sd.)	*Hippophae rhamnoides*	Snehak, Twachya, Hridya	• Good for skin • Cardiotonic	80 mg
Daruhaldi (St.)	*Berberis aristata*	Vranaghna, Twak Dosh Har	• Wound healing • Cures skin diseases	125 mg
Haldi (Rz.)	*Curcuma longa*	Vishghna, Varnya, Sthanik Shoth,Vedna Har,	• Anti-poisonous • Improves complexion • Anti inflammatory • Pain relieving	95 mg
Neem (Sd.)	*Azadirachta indica*	Kushthaghna, Twak Vikar Har	• Cures skin diseases	125 mg

Divya Capsule is Useful in:

- **General Skin Disorders**



Divya Capsule: Description in Classical Texts:

Bhavaprakasha has included Ashwagandha, under Guduchyadi varga, is vatakaphahara in action, having bitter and astringent tastes. It is hot in potency and promotes strength and is rejuvenating as well.

Sea buckthorn is mentioned by Bhavprakash Nighantu in Amradiphalavarga. It is useful to maintain healthy skin and has wound healing property as well.

Daruhaldi is under hareetakyadi varga in Bhava prakasha. It is bitter and astringent with light and dry properties. The potency is hot with Katu vipaka. It pacifies kapha and pitta doshas.

Haldi is pungent, bitter in taste, and hot potency. It has dryness property. It pacifies pitta dosha. Useful in disease caused by vitiation of blood.

Neem has cold potency, katu vipak and laghu property. It pacifies vata, pitta, kapha doshas. Useful in fatigue, anorexia.

Sesame oil has sweet taste with astringent aftertaste. It is having madhura vipaka and heavy in quality. It has hot potency but is cool to touch. Useful in all skin diseases and pacifies vata and kapha doshas.

Scientific Evidence of Divya Capsule:

To evaluate the herbal components, present in Divya capsule Gas Chromatography with Quadrupole Mass Spectrometer (GC MS/MS) was used. Two different approaches were used to analyze vegetarian soft gelatin, Divya capsules. In the first approach, a low boiling point sample was analyzed. As shown in Fig. 1, α-phellandrene, o-cymene, eucalyptol, terpinolene, α-curcumene, 7-epi-sesquithujene, β-sesquiphellandrene, 1-Isobutyl-2,5-dimethylbenzen, curlone, ar-turmerone, tumerone, and (E)-Atlantone found to be

present in the product. This was confirmed by comparing the compound with the National Institute of Standards and Technology (NIST) library and studying the mass fragmentation. For higher boiling point molecules, the second approach was used. For this sample was saponified and converted into methyl esters and analyzed on GC MS/MS. Both saturated and unsaturated fatty acids were found to be present in Divya capsule. As shown in Fig. 2, palmitic acid, palmitoleic acid, stearic acid, elaidic acid, oleic acid, and linoleic acid was present in the product.

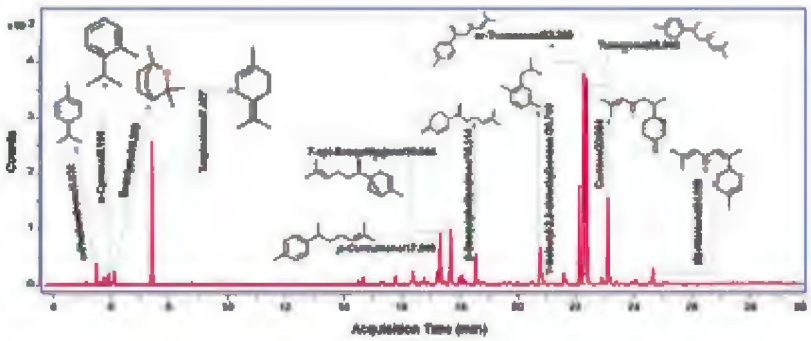


Fig.1.: Gas Chromatography equipped with Quadrupole Mass Spectrometer (GC MS/MS) shown the presence of α-phellandrene, o-cymene, eucalyptol, terpinolene, α-curcumene, 7-epi-sesquithujene, β-sesquiphellandrene, 1-Isobutyl-2,5-dimethylbenzen, curlone, ar-turmerone, tumerone, (E)-Atlantone.

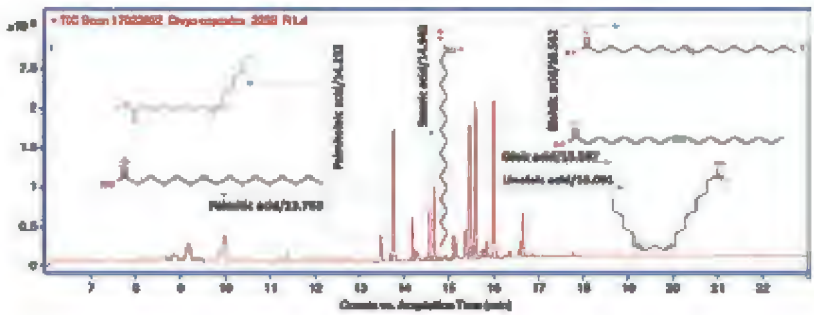


Fig.2.: Fatty acid composition present in Divya capsule are analyzed by Gas Chromatography with Quadrupole Mass Spectrometer (GC MS/MS) are palmitic acid, palmitoleic acid, stearic acid, elaidic acid, oleic acid, linoleic acid. The chemical structure of the representative compounds are provided with the chromatogram.

Dose and Method of Use of Divya Capsule:

Dose and Frequency	2 Capsules, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

DIVYA TAILA दिव्य तैल

Introduction to General Skin Disorders :

Skin disorders refer to a wide range of conditions that affect the skin, resulting in various symptoms and abnormalities. These disorders can affect people of all ages and can be caused by numerous factors, including genetics, infections, immune system dysfunction, allergies, environmental factors, and underlying medical conditions. Skin-related issues are quite common and can affect individuals of all ages and backgrounds. The prevalence of specific skin conditions varies depending on factors such as geographical location, age group, and genetic predisposition. Acne, Eczema, Psoriasis, Rosacea, Vitiligo, Fungal infections, Warts are some common examples of skin diseases.

The skin related issues can cause disorders such as social anxiety, fear of judgment, or discrimination. Suffering individuals may avoid social situations, intimate relationships, or activities they once enjoyed, leading to feelings of isolation and loneliness. Living with a chronic skin disorder can contribute to the development of depression and anxiety. The constant physical discomfort, social challenges, and negative self-perception can take a toll on mental well-being. Skin disorders can strain relationships, especially if the person with the condition feels misunderstood, unsupported, or stigmatized. Intimate relationships may also be affected due to concerns about physical appearance or fear of rejection. Skin disorders can disrupt daily routines, sleep patterns, and overall quality of life. Constant itching, discomfort, or pain can make it difficult to concentrate, work, or engage in leisure activities. Variety of medications and treatments are available in the modern time for different skin disorders.

Retinoids, such as isotretinoin (Accutane), are powerful medications used to treat severe acne. They work by reducing sebum production, preventing clogged pores, and decreasing inflammation. However, retinoids have potential side effects and require close monitoring. Oral corticosteroids, like prednisone, can be prescribed for various inflammatory skin conditions, such as severe eczema or psoriasis flare-ups. They help to reduce inflammation and suppress the immune system's response. Oral antifungal medications, such as fluconazole or terbinafine, are used to treat systemic fungal infections or severe cases of fungal skin infections, like ringworm or nail fungus. Some oral treatments, such as certain retinoids, can affect hormone levels. This may lead to menstrual irregularities in women or other hormonal imbalances.

Complementary approaches like emollients, moisturizers, proper skincare routines, and

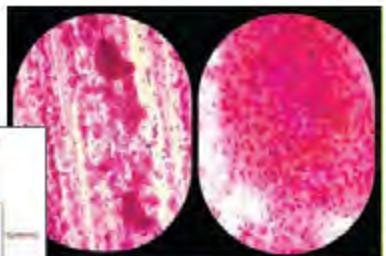
lifestyle modifications are often recommended to support the overall management of skin disorders. These can help maintain skin hydration, protect the skin barrier, and minimize triggers or irritants. In some cases, oral medications can have an impact on mood or mental health. Individuals may experience mood swings, irritability, or depression. It's important to discuss any changes in mood or mental well-being with a healthcare provider. Certain medications may have effects on blood cells, such as reducing the number of white blood cells or platelets. Regular blood tests may be required to monitor for these changes. Although rare, allergic reactions to oral medications can occur. Symptoms may include rash, itching, swelling, difficulty breathing, or dizziness. Immediate medical attention should be sought if an allergic reaction is suspected.

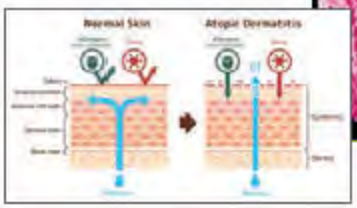
Ingredient and Medicinal Uses of Divya Taila:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g oil contains
Oil of:				
Ashwagandha (Sd.)	*Withania somnifera*	Sthanik Shoth Har Vatik Rog Har	• Anti-inflammatory • Alleviates vata doshik diseases	12 gm
Sea buckthorn (Sd.)	*Hippophae rhamnoides*	Snehak	• Lubricating	13 gm
Daruhaldi (St.)	*Berberis aristata*	Vranaghna Twak Dosh Har	• Wound-healing, • Alleviate skin ailments	20 gm
Haldi (Rz.)	*Curcuma longa*	Vishaghna Varnya Sthanik Shoth Vedana Har	• Anti toxic • Enhances complexion • Anti-inflammatory • Pain relieving	15 gm
Neem (Sd.)	*Azadirachta indica*	Kuhtaghna Twak Vikar Har	• Alleviates skin diseases	20 gm
Sesame (Sd.)	*Sesamum indicum*	Twak Snehak, Vatik Vikar Har	• Lubricates skin • Cures diseases of vata dosha	20 gm

Divya Taila is Useful in:

- **Skin Nourisher**
- **Atopic Dermatitis**





Divya Taila: Description in Classical Texts:

Ashwagandha, categorized under Guduchyadi varga in Bhavaprakasha, exhibits vatakaphahara properties with its bitter and astringent tastes. Possessing a hot potency, it enhances strength and rejuvenates the body.

Sea buckthorn, as mentioned in Bhavprakash Nighantu's Amradiphalavarga, serves the purpose of maintaining healthy skin and possesses wound-healing properties.

Daruhaldi, part of hareetakyadi varga in Bhavaprakasha, is characterized by its bitter and astringent tastes, along with light and dry properties. With a hot potency and Katu vipaka, it mitigates kapha and pitta doshas.

Haldi, known for its pungent and bitter taste, coupled with hot potency and dryness property, pacifies pitta dosha and proves beneficial in diseases caused by blood vitiation.

Neem, with its cold potency, katu vipak, and laghu property, pacifies vata, pitta, and kapha doshas, making it useful in addressing fatigue and anorexia.

Sesame oil, with its sweet taste and astringent aftertaste, exhibits madhura vipaka and is heavy in quality. Despite its hot potency, it feels cool to the touch and proves effective in treating various skin diseases while pacifying vata and kapha doshas.

Scientific Evidence of Divya Taila:

Patanjali Research Foundation has done extensive scientific evaluation of efficacy of Divya Taila, particularly in psoriasis. The efficacy of Psorogrit administered orally and Divya Taila administered topically have been evaluated in mouse models of 12-O-Tetradecanoyl-Phorbol-13-Acetate (TPA)-induced psoriasis like lesions and imiquimod-induced psoriasis.

A. TPA-induced psoriasis-like lesions:
Topical application of TPA leads to development of psoriasis-like skin lesions. In this study, TPA (2.5 µg) dissolved in acetone was applied on the right ear of the mice every alternate day for eleven days. This disease induction protocol led to the increase in ear thickness and ear edema as the evident macroscopic findings and epidermal hyperplasia, dermal inflammation, elongated rete ridges, and an increase in epidermal thickness as the major microscopic observations, when compared with normal animals. The combined administration of Psorogrit by oral route and Divya Taila by topically route mitigated the observed gross and histopathological changes induced with TPA. Accordingly, Psorogrit and Divya Taila might be promising therapies for patients afflicted with psoriasis.

B. Imiquimod-induced psoriasis:
The combination of Psorogrit and Divya Taila was tested to elucidate its anti-psoriatic efficacy in a mouse model of Imiquimod (IMQ)-induced psoriasis, which closely mimics the phenotypic and histological alterations as found in human plaque-type psoriasis. In this model, the commercially available 5% IMQ cream was topically applied on the shaved back and right ear of BALB/c mice, once a day for 8 consecutive days. This led to the development of hallmark

histopathological lesions of psoriasis including abnormal epidermal proliferation, hyperplasia, inflammatory cell infiltration and elongated rete ridges in the skin of the back and ear, which were clinically manifested as a significant increase in thickness and punch weight of the right ear in diseased animals. Additionally, the expression of epidermal thickening marker gene KRT17 was found to be elevated in psoriatic mice. Further, IMQ also led to systemic inflammation which resulted in an abnormal increase in the spleen weight of diseased animals. The concomitant treatment of oral administration of Psorogrit and topical application of Divya Taila for a period of 8 consecutive days, significantly attenuated the phenotypic, systemic and histological abnormalities triggered by IMQ application. Thus, the combination of Psorogrit and Divya Taila has a promising anti-psoriatic potential and could be used as an effective therapeutic agent for the treatment of psoriasis.

Phytochemical investigation of Divya Taila was performed on Gas Chromatography equipped with Mass Detector (GC MS/MS). The presence of α-phellandrene (retention time: 5.648 minute), o-cymene (retention time: 6.041 minute), eucalyptol (retention time: 6.209 minute), terpinolene (retention time: 7.441 minute), α-urcumene (retention time: 17.312 minute), 7-epi-sesquithujene (retention time: 17.673 minute), β-sesquiphellandrene (retention time: 18.544 minute), 1-isobutyl-2,5-dimethylbenzen (retention time: 20.765 minute), ar-turmerone (retention time: 22.274 minute), tumerone (retention time: 22.357 minute), curlone (retention time: 23.078 minute), (E)-atlantone (retention time: 24.624 minute) was concluded by comparing the data with NIST library. Detail GC MS/MS fingerprinting of the compound present in Divya Taila are shown in Fig. 1.

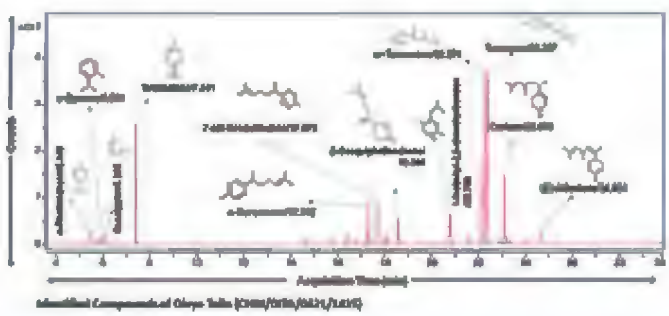


Fig. 1 Gas chromatography equipped with mass detector (GC MS/MS) confirm the presence of α-phellandrene (retention time: 5.648 minute), o-Cymene (retention time: 6.041 minute), Eucalyptol (retention time: 6.209 minute), Terpinolene (retention time: 7.441 minute), α-Curcumene (retention time: 17.312 minute), 7-epi-Sesquithujene (retention time: 17.673 minute), β-Sesquiphellandrene (retention time: 18.544 minute), 1-Isobutyl-2,5-dimethylbenzen (retention time: 20.765 minute), ar-Turmerone (retention time: 22.274 minute), Tumerone (retention time: 22.357 minute), Curlone (retention time: 23.078 minute), (E)-Atlantone (retention time: 24.624 minute).

Dose and Method of Use of Divya Taila:

As directed by the physician.
For external use only.

For further Information /Reading Scan the QR Code

Tablet

MELANOGRIT Gold

Introduction to Leukoderma:

Leukoderma, also known as vitiligo, is a chronic skin disorder characterized by the loss of skin pigmentation, resulting in the development of white patches or spots on various parts of the body. It occurs due to the destruction or dysfunction of melanocytes, the cells responsible for producing melanin, the pigment that gives color to the skin, hair, and eyes.

The exact cause of leukoderma is not fully understood, but it is believed to be a multifactorial condition involving a combination of genetic, autoimmune, and environmental factors. It is not contagious and does not pose any significant health risks, but it can have a considerable psychological and social impact on individuals affected by it.

Leukoderma can affect people of all races and ethnicities worldwide. The prevalence varies among different populations, with higher rates observed in certain regions. It is estimated that about 1% of the global population is affected by leukoderma, with no significant gender or age predilection. It can occur at any age, although it often begins in childhood or early adulthood.

The characteristic white patches of leukoderma can appear on any part of the body, but they commonly occur on sun-exposed areas such as the face, hands, arms, feet, and genitalia. The patches may start as small, pale spots and gradually enlarge over time. The progression of the condition is unpredictable, with some individuals experiencing stable or slow progression, while others may observe more rapid spreading of the white patches.

Managing leukoderma focuses on improving the appearance of the affected skin and minimizing the psychological impact on individuals. While there is currently no cure for leukoderma, several treatment options are available to achieve these goals. The choice of treatment depends on various factors, including the extent and location of the white patches, as well as individual preferences and response to therapy.

One of the common approaches in managing leukoderma is the use of topical corticosteroids. These medications are often prescribed to help reduce inflammation and promote repigmentation of the affected areas. They are usually applied to the white patches for several months. Topical calcineurin inhibitors, such as tacrolimus and pimecrolimus, may be used as alternatives to corticosteroids, especially in sensitive areas such as the face.

Another treatment option is topical psoralen Plus Ultra Violet A (PUVA) therapy. Psoralen, a light-sensitizing medication, is either applied topically or taken orally before exposure to

Ultra Violet A (UVA) light. This combination helps stimulate melanocyte activity and repigmentation. Narrow-Band Ultra Violet B (NB-UVB) therapy is also commonly used. It involves exposing the affected skin to narrowband UVB light, which can help stimulate melanocyte production and repigmentation.

In some cases, laser therapy may be employed. Excimer laser, for example, delivers a concentrated beam of UVB light to the affected areas, allowing targeted treatment. This approach can be particularly useful for smaller patches or in cases where other treatments have not been effective.

For individuals with widespread or extensive involvement, depigmentation may be considered. Depigmentation involves the use of topical agents to remove the remaining pigmentation from the unaffected areas, resulting in an overall even skin tone.

In addition to medical interventions, individuals with leukoderma may benefit from supportive measures to cope with the condition. Cosmetics can be used to camouflage the white patches and provide a more uniform appearance. Counseling or support groups can help address the psychological impact of leukoderma, as it can cause emotional distress and impact self-esteem. Practicing sun protection is essential to prevent sunburns on depigmented skin, as it can be more susceptible to damage from ultraviolet radiation.

It's important to note that the effectiveness of these treatments can vary from person to person, and it may take time to see noticeable results. Treatment plans are often tailored to individual needs, and regular follow-ups with a dermatologist or healthcare provider are crucial to monitor the progress of the condition and adjust the treatment plan accordingly.

In conclusion, leukoderma, or vitiligo, is a chronic skin disorder characterized by the development of white patches due to the loss of skin pigmentation. While it does not pose significant health risks, it can have a considerable psychological and social impact. Although there is currently no cure, various treatment options are available to manage leukoderma and improve the appearance of the affected skin. Topical corticosteroids, calcineurin inhibitors, PUVA therapy, NB-UVB therapy, and laser therapy are among the commonly used interventions. Supportive measures, such as cosmetics, counseling, and sun protection, are also important in managing the condition. Through a comprehensive approach, individuals with leukoderma can minimize the impact of the condition and enhance their quality of life.

Ingredients and Medicinal Uses of Melanogrit Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Fine Powder of:				
Swarn Bhasma	Classical Preparation	Kantivardhak, Kushthaghna, Vishghna	• Enhances skin texture • can cure skin diseases • anti poisonous	0.83 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Rajat Bhasma	Classical preparation	Twacha, Kantivardhak	• Enhances skin texture and complexion	24.17 mg
Moti Pishti	Classical Preparation	Dahashamak, Kanti vardhak	• Reduces burning sensation • Enhances skin texture and complexion	50 mg
Rasa Manikya	Classical Preparation	Kusthaghna, Visarphar, Shwetkusth Har	• Cure skin diseases	10 mg
Tamra Bhasma	Classical Preparation	Kusthaghna,	• Cure skin diseases	10 mg
Dry Extract of:				
Shodhit Bakuchi (Sd.)	*Psoralea corylifolia*	Kusthaghna, Shwitraghna	• Can cure skin diseases, leucoderma	230 mg
Khadir (Lf.)	*Acacia catechu*	Kusthaghna, Rakt dosh Har	• Can cure skin diseases • leucoderma	50 mg
Manjishtha (Rt.)	*Rubia cordifolia*	Vrana, Shodhak-Ropak	• Cures abscess	80 mg
Amaltas (Wl. Ft.)	*Cassia fistula*	Mridu Virechak, Kusthaghna	• Cure skin diseases	110 mg

Melanogrit Gold is Useful in:

- **Severe Leukoderma**
- **White Patches on Skin**

Melanogrit Gold: Description in Classical Texts:

Melanogrit Gold has been used for the management of severe leukoderma. Swarna Bhasma is helpful in Skin diseases, tuberculosis, epilepsy, anemia, hiccough, fever, hyperacidity, and heart ailments.

Rajat Bhasma can cure Skin problems like Leucoderma etc., fever, splenomegaly, epilepsy, diabetes, pitta roga. It can be given with chitrakmoolkashaya, parpatakkashaya, usheerakashaya, brahmi rasa, or honey.

Moti Pishti is helpful in ailments due to vitiated pitta dosha. It reduces burning sensation and can be given with honey or buttermilk.

Rasa Manikya is mentioned in Siddha BheshajaManimala. It is made by Shuddha Haritala powdered and kept within the sheets of Abhraka and heated till red hot to obtain manikyavarna. This drug is highly potent and indicated in fever of vata and kapha and is useful in skin diseases.

Tamra Bhasma can cure skin diseases, ascites, anemia, vata roga, kapha-pitta roga, diabetes, and indigestion. It can be given with Trikatu Kashaya, ghee, honey, durlabhakwath, ardraka rasa or guduchi rasa.

Shodhit Bakuchi is sweet, pungent, bitter in taste; pacifies kapha dosha; and has katuvipaka and dry property with cold potency. It acts as a tonic and laxative and helps manage polyuria, leprosy, fever, hair and skin diseases.

Khadir is bitter, astringent in taste & cold potency. It has light property; and pacifies pitta and kapha doshas. This drug can act in pruritic conditions, anemia, leucoderma, and blood diseases.

Manjishtha is sweet, pungent, astringent in taste and hot in potency It pacifies kapha dosha and has heaviness property. This drug is helpful in poisoning, edema, erysipelas, disease caused by vitiation of blood, and also improves complexion and voice.

Amaltas is sweet in taste, with cold potency and quality of heaviness and madhuravipaka. It pacifies pitta and kapha doshas and acts as a laxative. This is used in management of fever, heart ailments, and diseases caused by vitiation of vata.

Scientific Evidence of Melanogrit Gold:

Analysis of Melanogrit Gold was done by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector technique. In Melanogrit Gold, different compounds were obtained at 270 nm wavelength mainly protocatechuic acid, methyl gallate, vanillic acid, psoralenoside, isopsoralenoside, psoralen, and isopsoralen. In the chromatograms, the blue line represents standards and the pink line represents the test sample, as shown in Fig. 1.

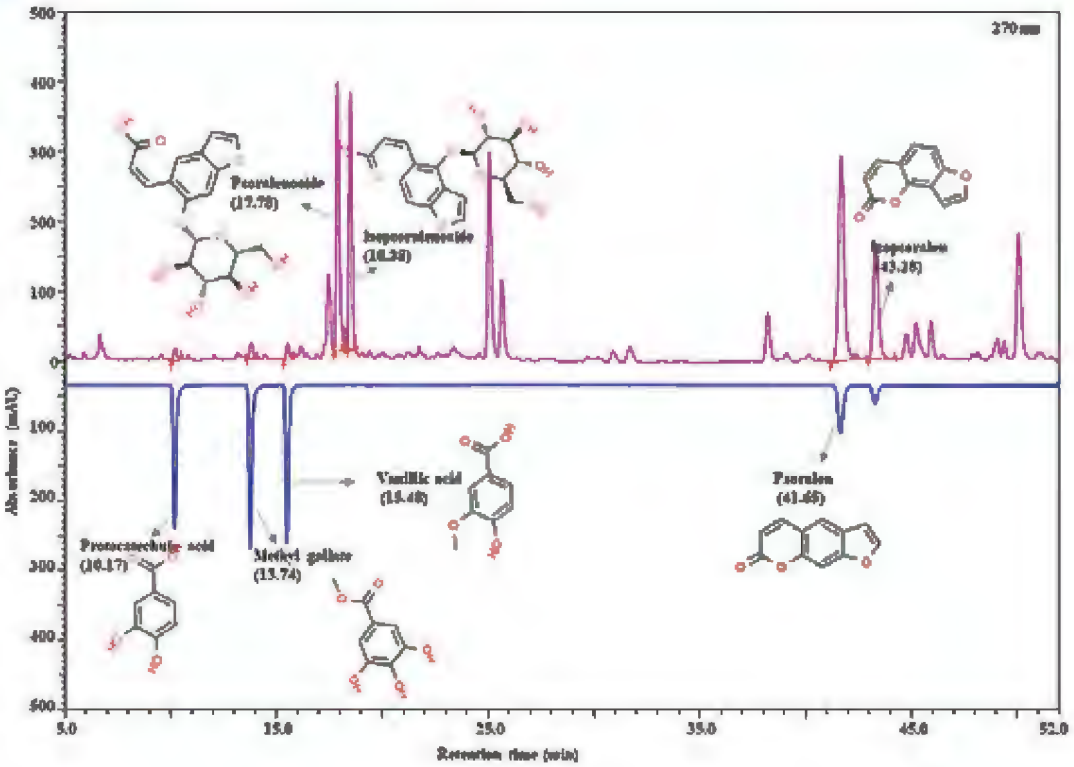


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Melanogrit Gold. In Melanogrit Gold, different compounds were observed at 270 nm wavelength mainly protocatechuic acid, methyl gallate, vanillic acid, psoralenoside, isopsoralenoside, psoralen, and isopsoralen. In the chromatograms, the pink line represents the test sample and inverted blue line represents standards, as shown in Fig. 1.

Dose and Method of Use of Melanogrit Gold:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

MELANOGRIT मेलानोग्रिट

Introduction to Leukoderma:

Leukoderma, also known as vitiligo, is a chronic skin disorder characterized by the loss of skin pigmentation, resulting in the development of white patches or spots on various parts of the body. It occurs due to the destruction or dysfunction of melanocytes, the cells responsible for producing melanin—the pigment that gives color to the skin, hair, and eyes

The exact cause of leukoderma, also known as vitiligo, is not fully understood, but it is believed to be a multifactorial condition involving genetic, autoimmune, and environmental factors. While it is not contagious and does not pose significant health risks, leukoderma can have a considerable psychological and social impact on affected individuals

The prevalence of leukoderma varies among different populations, but it affects people of all races and ethnicities worldwide. Leukoderma affects approximately 1% of the global population, with no significant gender or age predilection.

There is currently no cure for leukoderma, but several management options are available to help improve the appearance of the affected skin and minimize the psychological impact on individuals. The choice of treatment depends on the extent and location of the white patches, as well as individual preferences and response to therapy.

Some common management approaches for leukoderma include:

Topical corticosteroids:
These are often prescribed to help reduce inflammation and promote repigmentation of the affected areas. They are usually applied to the white patches for several months.

Topical calcineurin inhibitors:
Medications such as tacrolimus and pimecrolimus may be used as alternatives to corticosteroids, especially in sensitive areas such as the face.

Topical psoralen plus ultraviolet A (PUVA) therapy:
Psoralen, a light-sensitizing medication, is applied topically or taken orally before exposure to ultraviolet A (UVA) light. This combination helps stimulate melanocyte activity and repigmentation. Repigmentation by PUVA involves the close interaction of melanocytes and keratinocytes. During this process the number of functional melanocytes increases a few days after treatment and remains elevated for a month or two. There is an increased synthesis of melanosomes in the melanocytes, and transfer of melanosomes increases as a

result of more rapid turnover of keratinocytes. There is also an increased tyrosinase activity (the enzyme responsible for melanin synthesis) in melanocytes. Finally, the pattern of melanosome distribution in skin changes from one aggregated in keratinocytes to that of single melanosomes. This switch in distribution, which persists for many months, explains the long duration of hyperpigmentation induced by PUVA.

Narrowband ultraviolet B (NB-UVB) therapy: This involves exposing the affected skin to narrowband UVB light, which can help stimulate melanocyte production and repigmentation.

Excimer laser:
This laser therapy delivers a concentrated beam of UVB light to the affected areas, allowing targeted treatment.

Depigmentation: In cases where the majority of the skin is affected, depigmentation may be considered to even out the skin tone by removing the remaining pigmentation.

It's important to note that the effectiveness of these treatments can vary from person to person, and it may take time to see noticeable results. Regular follow-ups with a dermatologist or healthcare provider are crucial to monitor the progress of the condition and adjust the treatment plan accordingly.

In addition to medical interventions, individuals with leukoderma may benefit from supportive measures such as using cosmetics to camouflage the white patches, counseling or support groups to address psychological concerns and practicing sun protection to prevent sunburns on depigmented skin.

Overall, while leukoderma can be challenging to manage, various treatment options and supportive measures are available to help individuals cope with the condition and improve their quality of life. Traditional therapies like Ayurveda and naturopathy are being looked at for safe and effective treatment options for leukoderma.

Ingredients and Medicinal Uses of Melanogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Shodhit Bakuchi (Sd.)	*Psoralea corylifolia*	Kusthaghna, Shwitraghna	• Alleviates skin diseases • Leucoderma	230 mg
Khadir (Lf.)	*Acacia catechu*	Prameha Har Tridoshagna	• Useful in diabetes • Balances tridoshas	55 mg
Manjishtha (Rt.)	*Rubia cordifolia*	Vrana Shodhak-Ropak	• Cleans and heals wounds	85 mg
Amaltas (Ft.)	*Cassia fistula*	Mridu Virechak, Kusthaghna	• Mild laxative • Alleviates skin diseases	110 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Fine Powder of:				
Rasa Manikya	Classical Preparation	Kusthaghna, Visarp Har, Shwet Kusth Har	• Alleviates skin diseases • Alleviates erysepilasis • Vitiligo	10 mg
Tamra Bhasma	Classical Preparation	Kusthaghna	• Alleviates skin diseases	10 mg

Melanogrit is Useful in:

- **Leucoderma**
- **White Spots on Skin**

Melanogrit: Description in Classical Texts:

Melanogrit is formulated by using very potent herbal and mineral components from the science of traditional Ayurveda. The drugs used here are very effective in leukoderma and also a variety of skin diseases.

Shodhit Bakuchi is sweet and bitter in taste and has cold potency. This herb, which is mentioned under Hareetakyadi varga in Bhava prakasha, pacifies kapha dosha. It has katu vipaka.and is dry in quality. Also acting as a tonic and laxative, it cures fever, anemia as well as hair and skin diseases.

Khadir is bitter, astringent in taste and has cold potency. It pacifies pitta and kapha doshas and has the quality of lightness in it. Bhava prakasha has included this drug under Vatadi varga. This can cure pruritus, anemia, leukoderma, and blood diseases.

Bhava prakasha has included Manjishtha under Hareetakyadi varga. It is sweet, pungent, astringent in taste with a hot potency, pacifying kapha dosha. It has the quality of heavyness. This is helpful in poisoning, edema, erysipelas, disease caused by vitiation of blood, polyuria, it improves complexion and voice.

Amaltas included under Hareetakyadi varga by Bhava prakasha is sweet in taste. It has cold potency, heavy in quality and madhur vipaka. It pacifies pitta and kapha doshas. It acts as a laxative. It cures fever, heart ailments and can be beneficial in skin diseases.

Rasa Manikya is mentioned in Siddha Bheshaja Manimala. It is made by Shuddha Haritala powdered and kept within the sheets of Abhraka and heated till red hot to obtain manikya varna. This drug is highly potent and indicated in fever of vata and kapha and is useful in skin diseases.

Tamra Bhasma can cure anemia, kapha-pitta roga and skin diseases. It can be administered with Trikatu Kashaya, ghee, honey, durlabha kwath, ardraka rasa or guduchi rasa.

Scientific Evidence of Melanogrit:

The study was aimed to identify plant-based stimulators of melanogenesis that could be further used in the therapies against vitiligo. The researchers at Patanjali Research Foundation show that Melanogrit is a novel herbo-mineral combination, that could potentiate melanogenesis in B16F10 murine melanocytes. The study designed experiments employing B16F10 alone or co-cultured with keratinocytes to decipher the mechanism of melanogenesis induction through MLG. However, we determined that B16F10 cells spiked with a sub-optimal dose of αMSH (α-Melanocyte-stimulating hormone) (0.2 nM) was the apt model to study melanogenesis, here. The study determined that the 0.2 nM dose of αMSH had no effect on the transcriptional and translational levels of the melanogenesis pathways. The same was supported by phenotypic observations reflecting dendrite formations and melanin biosynthesis. Melanogrit, however in the sub-optimally αMSH stimulated B16F10 cells, enhanced the transcriptional of MITF, TYR and TRP1, the key players of melanogenesis. Melanogrit treatment potentiated the cellular tyrosinase activity and melanin levels, both, extracellularly and intracellularly. The kinases, ERK and GSK3β have already been reported to regulate the ubiquitin-proteasomal degradation of MITF; Melanogrit, significantly reduced the pERK levels while increasing the protein levels of MITF. Interestingly it was observed almost constant levels of pGSK3β. Based on the above findings, the study proposed Melanogrit as an effective therapy for vitiligo.

A phytochemical study confirms the presence of about 87 molecules in Melanogrit tablet using Ultra Performance Liquid Chromatography coupled with Quadrupole Time of Flight (UPLC/Q-ToF) mass detector as shown in Fig. 1

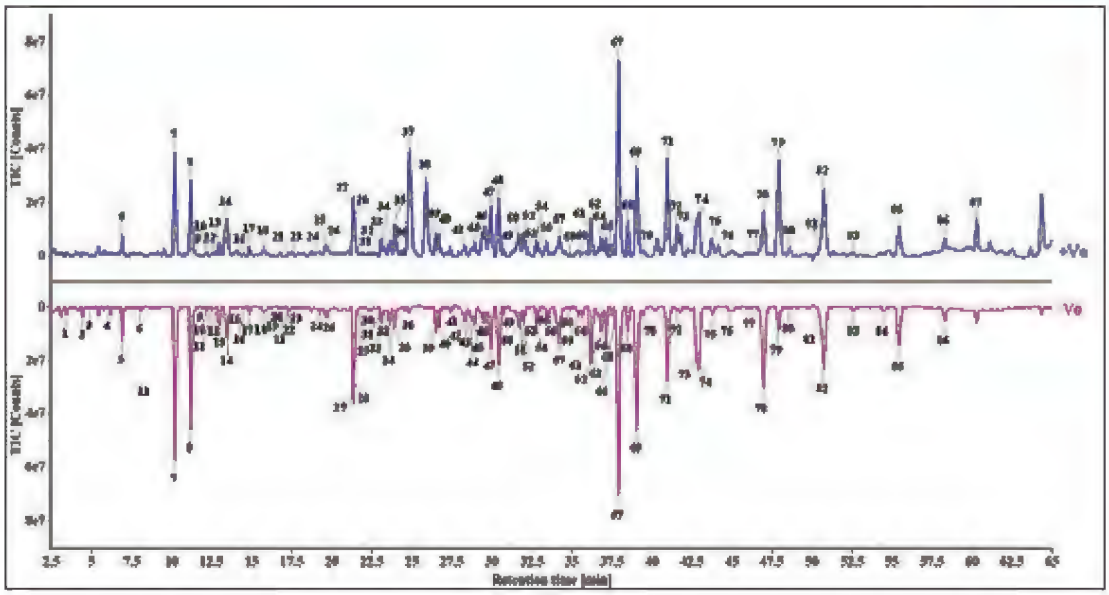


Fig.1: Ultra Performance Liquid Chromatography with Quadrupole Time of Flight (UPLC/Q-ToF) mass detector in both positive (in blue) and negative (in pink) mode confirms the presence of 87 phytocompounds in Melanogrit Tablet.

Dose and Method of Use of Melanogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Melanogrit LEP

Introduction to Leukoderma:

Leukoderma, commonly referred to as vitiligo, is a persistent skin disorder marked by the loss of skin pigmentation, leading to the formation of white patches or spots across different areas of the body. This condition arises due to the damage or malfunction of melanocytes, the cells responsible for producing melanin—the pigment providing color to the skin, hair, and eyes. It transcends racial and ethnic boundaries, affecting individuals worldwide. The prevalence of leukoderma varies among populations, with higher occurrences noted in specific regions. Approximately 1% of the global population is estimated to be impacted by leukoderma, with no discernible gender or age bias. Although it can manifest at any age, onset typically occurs in childhood or early adulthood.

The distinctive white patches associated with leukoderma can manifest on any part of the body, frequently appearing on sun-exposed areas like the face, hands, arms, feet, and genitalia. These patches often begin as small, pale spots and may progressively enlarge over time. The progression of the condition is unpredictable, with some individuals experiencing a stable or slow advancement, while others witness a more rapid spread of the white patches.

While there is currently no cure for leukoderma, various management options exist to enhance the appearance of affected skin and alleviate the psychological impact on individuals. Treatment selection hinges on factors such as the extent and location of the white patches, as well as individual preferences and response to therapy.

A common strategy in managing leukoderma involves the application of topical corticosteroids, prescribed to mitigate inflammation and facilitate repigmentation of affected areas. These medications are typically administered to the white patches over several months. Topical calcineurin inhibitors, such as tacrolimus and pimecrolimus, may serve as alternatives to corticosteroids, particularly in sensitive areas like the face.

Another treatment avenue is topical Psoralen Plus Ultra Violet A (PUVA) therapy, where Psoralen, a light-sensitizing medication, is either topically applied or taken orally before exposure to Ultra Violet A (UVA) light. This combination stimulates melanocyte activity and repigmentation. Narrow Band Ultra Violet B (NBUVB) therapy is also commonly employed, involving exposure of affected skin to narrowband UVB light, fostering melanocyte production and repigmentation.

Laser therapy, such as Excimer laser, may be utilized in some cases, delivering a concentrated beam of UVB light to targeted areas for precise treatment. This approach proves beneficial for smaller patches or instances where other treatments prove ineffective.

For individuals with widespread or extensive involvement, depigmentation might be considered. This process employs topical agents to eliminate remaining pigmentation from unaffected areas, resulting in an overall even skin tone.

Beyond medical interventions, individuals with leukoderma can benefit from supportive measures to cope with the condition. Cosmetics can be employed to conceal white patches and achieve a more uniform appearance. Counseling or participation in support groups can address the psychological impact of leukoderma, which often induces emotional distress and affects self-esteem. Practicing sun protection is crucial to prevent sunburns on depigmented skin, which is more susceptible to damage from ultraviolet radiation.

It's essential to recognize that the efficacy of these treatments can vary from person to person, and noticeable results may take time. While there is currently no cure, a range of treatment options exists to manage leukoderma and enhance the appearance of affected skin. Topical corticosteroids, calcineurin inhibitors, PUVA therapy, NB-UVB therapy, and laser therapy are commonly used interventions. Additionally, supportive measures like cosmetics, counseling, and sun protection play pivotal roles in managing the condition.

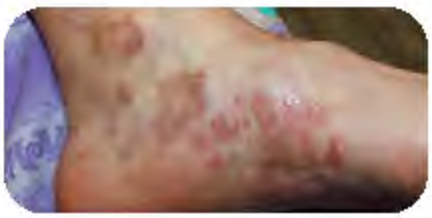
Ingredients and Medicinal Uses of Melanogrit Lep:

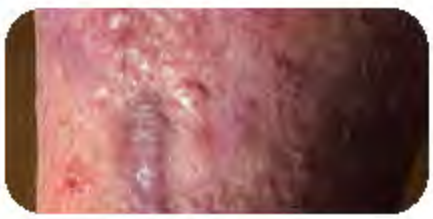
Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Liquid of:				
Aloevera Juice (Lf. Pp.)	*Aloe barbadensis*	Pachak, Balya, Vranaropak, Shothhar	• Increases absorption • Strength promoting • Wound healing • Anti-inflammatory	52.260 g
Dry Extract of:				
Shodhit Bakuchi (Sd.)	*Psoralea corylifolia*	Kusthaghna, Shwitraghna	• Alleviates skin diseases, leucoderma	2.30 g
Khadir (Lf.)	*Acacia catechu*	Kusthaghna, Rakt Dosh Har	• Alleviates diseases • Alleviates blood disorders	0.550 g
Manjishtha (Rt.)	*Rubia cordifolia*	Vrana Shodhak-Ropak	• Cleans and heals wounds	0.850 g
Amaltas (Wl. Ft.)	*Cassia fistula*	Mridu Virechak, Kusthaghna	• Mild laxative • Alleviates skin diseases	1.100 g

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Fine Powder of				
Rasa Manikya	Classical Preparation	Kusthaghna,, Visarp Har Shwetkusth Har	• Alleviates skin diseases • Alleviates erysepilasis • vitiligo	0.100 g
Tamra Bhasma	Classical Preparation	Kusthaghna	• Alleviates skin diseases	0.100 g

Melanogrit Lep is Useful in:

- **Skin Diseases**
- **Diseases due to Vitiation of Blood**
- **Lichen Planus**





Melanogrit Lep: Description in Classical Texts:

Melanogrit lep is prepard by using very potent herbal and mineral components from the science of Traditional Ayurveda. The drugs used here are very effective in leukoderma and also a variety of skin diseases.

Raja Nighantu has included aloe vera under Parpatadivarga. It has bitter taste with qualities of heaviness and sliminess; with a cold potency and katuvipaka. It pacifies all three doshas and is good in alleviating skin diseases as well.

Bakuchi is sweet and bitter in taste and has cold potency. This herb, which is mentioned under Hareetakyadivarga in Bhava prakasha, pacifies kapha dosha. It has katuvipaka and is dry in quality. Also acting as a tonic and laxative, it cures fever, anemia as well as hair and skin diseases.

Khadir is bitter, astringent in taste and has cold potency. It pacifies pitta and kapha doshas and has the quality of lightness in it. Bhava prakasha has included this drug under Vatadivarga. This can cure pruritus, anemia, leukoderma, and blood diseases.

Bhava prakasha has included Manjishtha under Hareetakyadivarga. It is sweet, pungent, astringent in taste with a hot potency, pacifying kapha dosha. It has the quality of heavyness. This is helpful in poisoning, edema, erysipelas, disease caused by vitiation of blood, polyuria, it improves complexion and voice.

Amaltas included under Hareetakyadivarga by Bhava prakasha is sweet in taste. It has cold potency, heavy in quality and madhurvipaka. It pacifies pitta and kapha doshas. It acts as a laxative. It cures fever, heart ailments and can be beneficial in skin diseases.

Rasa Manikya is mentioned in Siddha Bheshaja Manimala. It is made by Shuddha Haritala powdered and kept within the sheets of Abhraka and heated till red hot to obtain manikyavarna. This drug is highly potent and indicated in fever of vata and kapha and is useful in skin diseases.

Tamra Bhasma can cure anemia, kapha-pitta roga and skin diseases. It can be administered with Trikatu Kashaya, ghee, honey, durlabhakwath, ardraka rasa or guduchi rasa.

Scientific Evidence of Melanogrit Lep:

Analysis of Melanogrit Lep was done by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector technique. In Melanogrit Lep, different compounds were obtained at 270 nm wavelength mainly Protocatechuic acid, Psoralenoside, Isopsoralenoside, Psoralen, Isopsoralen. In the chromatograms, the blue line indicates standards and the pink line shows the test sample, as shown in Fig. 1.

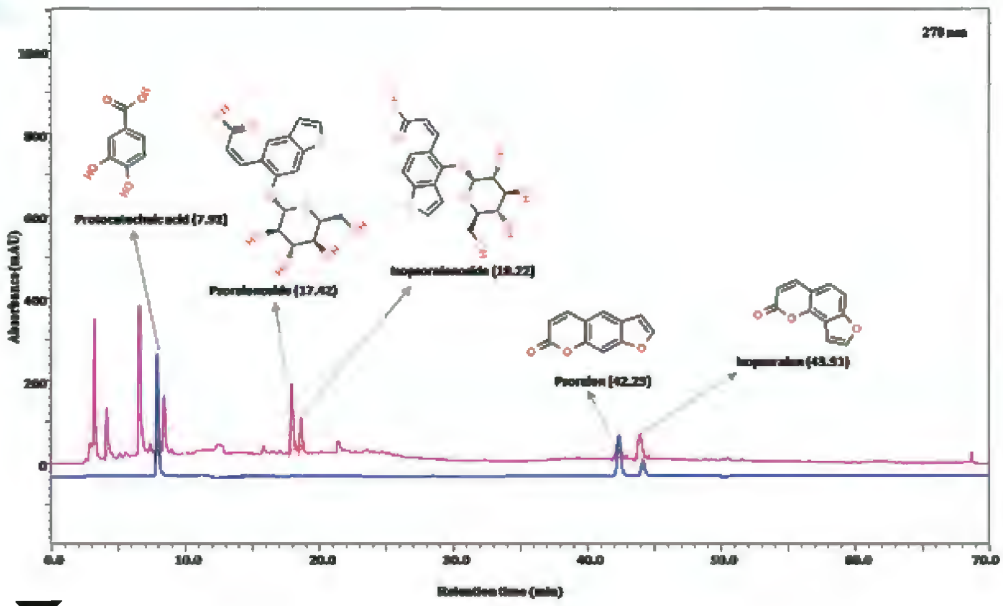


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of the Melanogrit Lep. In Melanogrit Lep, the compounds were obtained at 270 nm wavelength: A) Protocatechuic acid, B) Psoralenoside, C) Isopsoralenoside, D) Psoralen , E) Isopsoralen. In the chromatograms, the blue line represents standards and the pink line represents the test sample.

Scientific Evidence of Melanogrit Lep:

Dose and Frequency	Apply gently over the affected area, twice a day
Or as directed by the physician.	

Cream

CANDIFADE कैंडीफेड

Introduction to Candidiasis:

World Health Organization (WHO) defines social participation, a measure of disability, broadly as a person's capacity to be interested and engaged in relationships with others. Skin problems pose a serious threat to patients' well-being, mental health, ability to function, and social participation. There are various types of skin disorders in which Acne is a common skin condition that occurs when hair follicles become clogged with oil, dead skin cells, and bacteria. It often presents as pimples, blackheads, whiteheads, cysts, or nodules on the face, neck, chest, back, or shoulders. Acne can affect people of all ages, but it is most prevalent during adolescence due to hormonal changes. Candidiasis, also known as a yeast infection, is a fungal infection caused by the Candida species, most commonly *Candida albicans*. It can affect various parts of the body, including the skin, mouth, throat, genitals, and bloodstream.

Dermatitis, also known as eczema, is a common skin condition characterized by inflammation of the skin. It can occur in people of all ages and typically involves symptoms such as redness, itching, dryness, and skin rash. Fungal infections are caused by various types of fungi that can affect different parts of the body, including the skin, nails, hair, and mucous membranes. Fungal infections can range from mild and superficial conditions to more severe and invasive infections. Dermatophytosis (Ringworm): A contagious fungal infection that can harm the skin, scalp, nails, or feet. Typically, it results in rashes that are circular or ring-shaped, have red edges, and have healthy-looking skin in the center. The global prevalence of dermatophytosis varies, but it is estimated to affect around 20-25% of the population. It is more common in warm and humid climates. The visible nature of many skin disorders can lead to social anxiety and avoidance of social situations. Many skin disorders are chronic, meaning they last for an extended period or recur frequently. Dealing with a long-term condition can be emotionally draining, and the uncertainty of flare-ups or recurrence can add to the stress and frustration. Visible skin disorders can be stigmatizing, leading to social isolation and discrimination. People with skin conditions may face judgment, misconceptions, and negative stereotypes from others, which can impact their social relationships, career prospects, and overall well-being.

Skin disorders can interfere with daily activities and routines. For example, certain skin conditions may require specific skincare regimens, frequent medical appointments, or avoidance of triggers. These demands can disrupt work, school, and personal life, causing

practical challenges and time constraints. Over-the-counter or prescription antifungal creams, such as clotrimazole, miconazole, or ketoconazole, are frequently used to treat localized candidiasis on the skin. These creams are applied directly to the affected area and help eliminate the *Candida albicans* fungus. Powders containing antifungal agents like clotrimazole or miconazole can be applied to areas prone to moisture and fungal overgrowth, such as the groin area. These powders help keep the area dry and inhibit fungal growth. Nystatin is an antifungal medication available in cream or ointment form. It is commonly used for treating candidiasis in the diaper area (diaper rash) or in skin folds. Nystatin works by disrupting the cell membranes of the Candida fungus. In some cases, antiseptic solutions like diluted vinegar (acetic acid) or chlorhexidine may be recommended to cleanse and reduce the fungal load on the affected skin. These solutions are typically used in combination with antifungal creams or ointments. These available topical treatments are accompanied with a variety of side effects such as mild skin irritation, redness, itching, or burning at the site of application. Some topical treatments, such as retinoids or salicylic acid, can cause dryness and peeling of the skin.

Allergic reactions symptoms may include rash, hives, swelling, or difficulty breathing. If you experience any signs of an allergic reaction, discontinue use and seek immediate medical attention. Prolonged use of potent corticosteroid creams or ointments can lead to thinning of the skin, especially when used on sensitive areas or in high concentrations. Some topical treatments, particularly those containing retinoids or certain antibiotics, can increase the skin's sensitivity to sunlight. It is important to use sun protection measures, such as wearing sunscreen and protective clothing, while using these medications. In some cases, topical treatments may cause temporary or permanent discoloration of the skin. This can manifest as hyperpigmentation (darkening) or hypopigmentation (lightening) of the treated area.

Ingredients and Medicinal Uses of Candifade:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 ml contains
Ashwagandha Oil (Sd.)	*Withania somnifera*	Balya, Rasayan, Twakposhak	• Strengthening • Rejuvenating • Nourishes skin	5 %
Aloevera Juice (Lf. Pp.)	*Aloe barbadensis*	Twaksnehak, Charm-Rog Har, Vranghna	• Cures skin diseases • Lubricates skin • Wound healing	78 %
Sandal wood (Wd.)	*Santalum album*	Twak Daha-Shamak, Varnya, Sugandhit	• Alleviates burning sensation of skin • Improves complexion • Gives fragrance	0.5 %

Candifade is Useful in:

- **Anti Itching**
- **Anti Fungal**

Candifade: Description in Classical Texts:

Candifade is an Ayurvedic proprietary medicine used for fungal infection. It has ingredients mentioned by Ayurvedic classical texts as effective in skin diseases and to maintain healthy skin. Aloe Vera Juice has sweet and bitter tastes; with property of lightness; and cold in potency. It pacifies vata and pitta doshas. This drug acts as a laxative, tonic, anabolic, aphrodisiac; and can cure poisoning, spleen diseases, hepatomegaly, fever caused by vitiation of kapha, burns, eruptions, blood and skin diseases.

Sandal Wood Extract is katu in taste. Physical property is lightness and dryness. This drug is cold in potency; and pacifies pitta and kapha doshas. It can cure debility, thirst, poisoning, burning, and is specially indicated in cholasma, disease caused by vitiation of blood.

Ashwagandha Oil has Kashaya and tikta in taste. Physical Property is lightness and sharpness. It has katu vipaka and potency; and pacifies pitta, kapha doshas. This drug can alleviate Jaundice, spleen diseases, skin diseases, ulcer, and poisoning.

Scientific Evidence of Candifade:

The oil obtained from seeds of *Withania somnifera*, through super critical fluid extraction. *W. somnifera* Seed Oil (WSSO) contains palmitic, stearic, oleic, linoleic, ecosatrienoic and nervonic acids. The Antifungal activity of WSSO against *C. auris* was assessed through spread plate and broth microdilution methods. Preliminary spread plate analysis showed that the *C. auris* strain being studied could retain 229 some growth at Amphotericin B (AMB) break point of 2 µg ml-1. *C. auris* growth observed through this method on 230 agar plate, spread with undiluted WSSO, was comparable to that observed for AMB.

Broth microdilution coupled fungicidal concentration determination efforts revealed that although, *C. auris* was remarkably susceptible to WSSO, however, a definitive fungicidal value for the same was not achieved,

as shown in Fig. 1a. From the time-kill curve of the untreated cells, we observe that logarithmic growth phase of *C. auris* spans from 4 to 12 hrs, as shown in Fig. 2b. AMB postponed the commencement of logarithmic phase by 4 hrs, that is, AMB treated cells entered exponentially growing phase by 8 hrs unlike untreated, in which the absorbance started rising by 4 hrs. Although, WSSO treated cells entered log phase by 4 hrs, but growth rates were slower than the untreated cells, although, stationary phases arrived at the same time in both these groups. This showed that WSSO treatment had a progressive '-static' effect on these *C. auris* cells. WSSO is rich in fatty acids which are known to alter membrane fluidity and potentially affect the cell permeability. Additionally, damaged cell wall and/or cell membrane affect fungal growth.

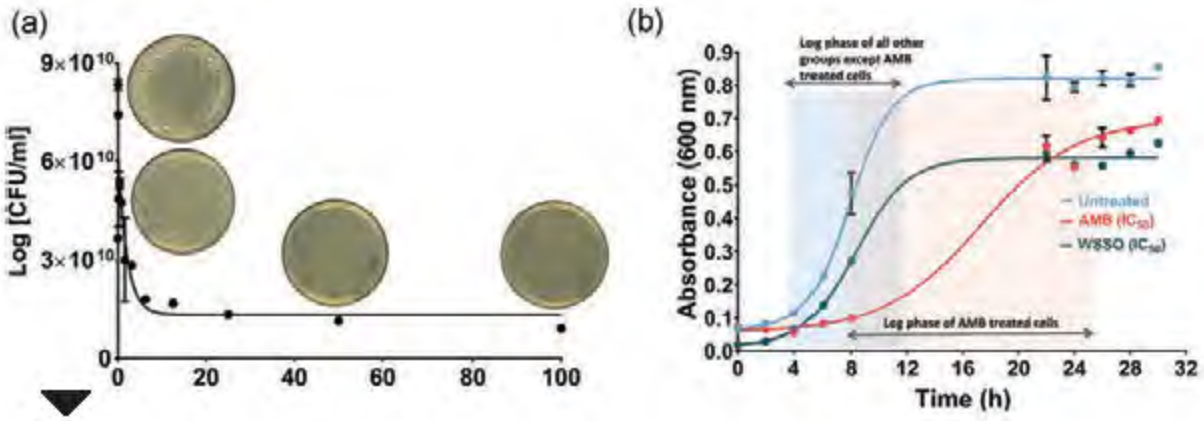


Fig. 1. WSSO acts as a fungistatic agent. Log [CFU ml-1] versus WSSO concentration (a) and time-kill kinetics (b) plot fitted with Gompertz function demonstrating the fungistatic effect of WSSO against *C. auris*. Representative digital images of microbiological plates with CFUs arising from WSSO treatment of *C. auris* at different concentrations are aligned along the susceptibility curve in (a).

C. auris, like all other fungi, possess both cell wall and cell membrane, with ergosterol as an important component of the latter. Therefore, ergosterol binding (Fig. 3a) and sorbitol protection (Fig. 3b) assays were conducted to evaluate the effect of WSSO treatment on cell membrane and cell wall, respectively. AMB was included as positive control. When an antifungal agent, like, AMB binds the membrane-associated ergosterol, these sterol molecules are sequestered and pores are created in the cell membrane leading to intra-cellular leakage-mediated cell death (left arm of Fig. 3a). However, presence of ergosterol in the culture medium competitively inhibits AMB from binding the membrane-associated ergosterol. This results in inefficient pore formation in the fungal cell membrane and consequent reduction in the antifungal efficacy (increased IC50 value) of the agent (right arm of Fig. 2a). Similarly, increase in IC50 value of the antifungal agent in the presence sorbitol in the medium shows that the fungal cell wall is targeted (Fig. 2b). For example, if *C. auris* cell wall is affected by WSSO, essentially protoplasts will be generated (indicated through the right arm in Fig. 2b). Consequently, the regular growth medium will be hypotonic for these protoplasts leading to endosmosis, cell swelling and finally, bursting. But, presence of sorbitol

increases the tonicity of the media and thereby prevents endosmosis from the protoplasts through a cushioning effect (left arm of Fig. 2a). Resultantly, the protoplasts are prevented from swelling and bursting, and thus, a reduction in the antifungal effect may be expected, seen as increased IC50 value of WSSO in the presence of sorbitol. We did not observe any increase in IC50 value of AMB in the presence of sorbitol, thus, indicating that AMB did not affect the cell wall to generate protoplast (Fig. 2c). However, IC50 value of WSSO in the presence of sorbitol was increased about 3.51-fold, which showed that the cell wall was affected (Fig.2d). As expected, presence of ergosterol in the medium increased the IC50 value of AMB by 5.33-fold, confirming that this antifungal agent acts through binding membrane-associated ergosterol (Fig. 2c). Comparable increase in the IC50 value of WSSO by 4.88-fold in the presence of ergosterol in the media was evident for cell membrane targeting (Fig.2d). Altogether, these observations demonstrated that WSSO affected both cell wall and cell membrane of *C. auris*.

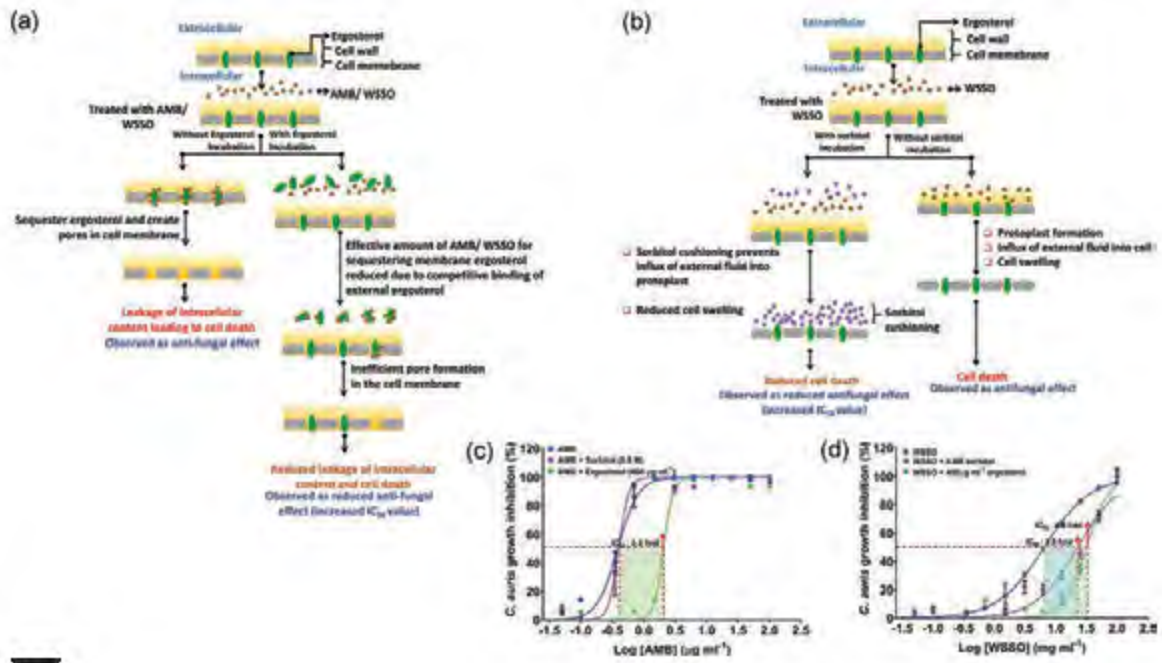


Fig. 2. WSSO targets both cell wall and cell membrane in *C. auris*. (a, b) Illustrative schematics showing the anticipated modes of action of AMB and WSSO against cell membrane alone, and cell membrane and cell wall, through ergosterol binding (a) and sorbitol protection (b) assays, respectively. (c, d) DRCs, resulting from non-linear regression analysis of sorbitol protection and ergosterol binding assays, showing the effect of AMB (c) and WSSO (d) on cell wall and cell membrane of *C. auris*.

The above observations were confirmed through microscopic analysis of LPCB-stained *C. auris* cells. LCPB contains phenol, cotton blue dye and Trypan blue (TB). The phenol present in this dye makes the cells permeable to TB. As a result, while TB stains the intracellular contents, the cotton blue dye stains the fungal cell wall. TB can stain the chitin and glucan present in fungal cell wall. The fungal structures are preserved by the acetic acid present in LPCB. Therefore, LCPB-stained normal untreated *C. auris* cells appeared blue with cerulean green border (Fig. 3a panel i). This set up is appropriate for analysing effects on cell wall or membrane by monitoring the staining of intracellular contents. TB stained cytosolic contents of AMB treated cells were found to have leaked out of the cells (Fig. 3a panel ii). In case of WSSO treatment, the intracellular contents were observed to be reduced as evident from significantly low LCPB staining (Fig. 4a panels iii-v, 3b). These microscopic analyses confirmed our observations from ergosterol binding and sorbitol protection assays (Fig. 3b). Altogether, these observations establish that WSSO targets both cell wall and cell membrane of *C. auris*.

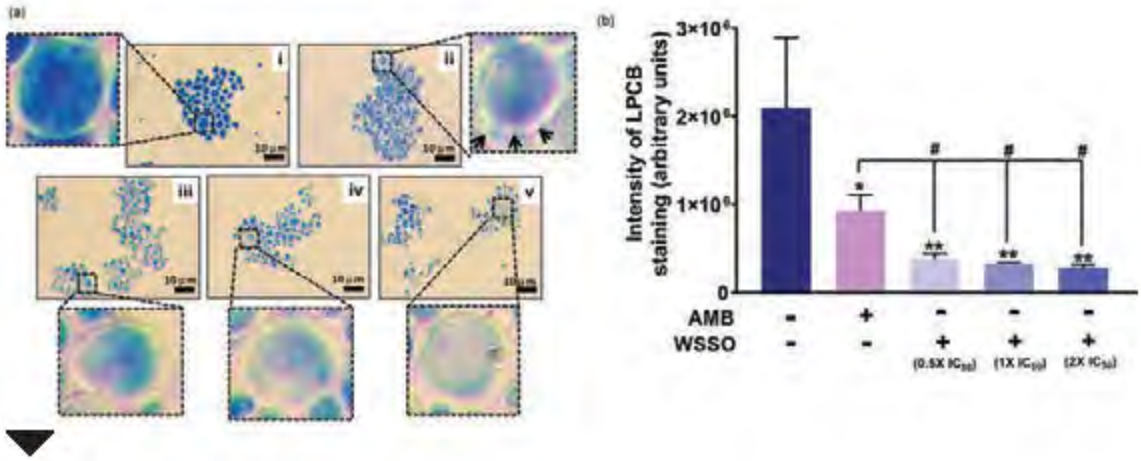


Fig. 3. Intracellular contents of *C. auris* are lost upon WSSO treatment. (a) Representative bright-field images of LPCB stained untreated *C. auris* cells (i) and those treated with 2 µg ml-1 AMB (ii) and 0.5X (iii), 1X (iv) and 2X (v) IC50 concentrations of WSSO. (b) Quantitative representation of the data in (a) as effect of AMB/WSSO treatment on the intensity of LPCB staining, determined in the bright-field images through Image J software. The statistical significance of the observed differences between different groups was analyzed through on-way ANOVA and represented as * and ** for p value < 0.05 and 0.01, respectively when compared with cells that received neither AMB nor WSSO treatment.

Cell membrane integrity is critical for biofilm formation, which is one of the crucial aspects associated with *C. auris* pathogenesis. Since, our previous observation showed that WSSO efficiently targeted cell wall and cell membrane, therefore, we were interested about its possible effects on *C. auris* biofilm. When WSSO treatment was given right from the beginning, biofilm formation was reduced noticeably. At a concentration of 8.52 mg ml-1 (BIC50), WSSO could inhibit 50 % of biofilm formation (Fig. 4a). Subsequently, effect of WSSO on eradication of mature *C. auris* biofilms was evaluated over 24, 48, 72 and 96 hrs. WSSO was found to be quite effective in eradicating mature biofilms. This effect was observed to be both concentration

and time dependent, as was evident from gradually decreasing BEC50 concentrations over time (Fig. 4b). For a 96 hrs treatment, 7.22 mg ml-1 (BEC50) of WSSO was sufficient for eliminating 50 % of the mature biofilm (Fig. 4b, 5c panel iv, 5c). Treatment with two (2X BEC50) and four (4X BEC50) folds more of this concentration of WSSO, actually removed almost 80 % of the mature biofilm (Fig. 4c, panel v & vi; 4d). As expected, Fluconazole (FLC) (12 µg ml-1) was not effective in eradicating biofilm as evident from similar area coverages of biofilm in case of untreated and FLC treated samples (Fig. 4c, panels i & ii, 4d). Curiously, AMB was also not very effective against mature biofilm (Fig. 4c, panel ii). In fact, WSSO, at all the studied concentrations, was found to be a significantly better anti-biofilm agent (Fig. 4d). Altogether, these observations proved that WSSO is an efficient anti-biofilm agent against *C. auris*.

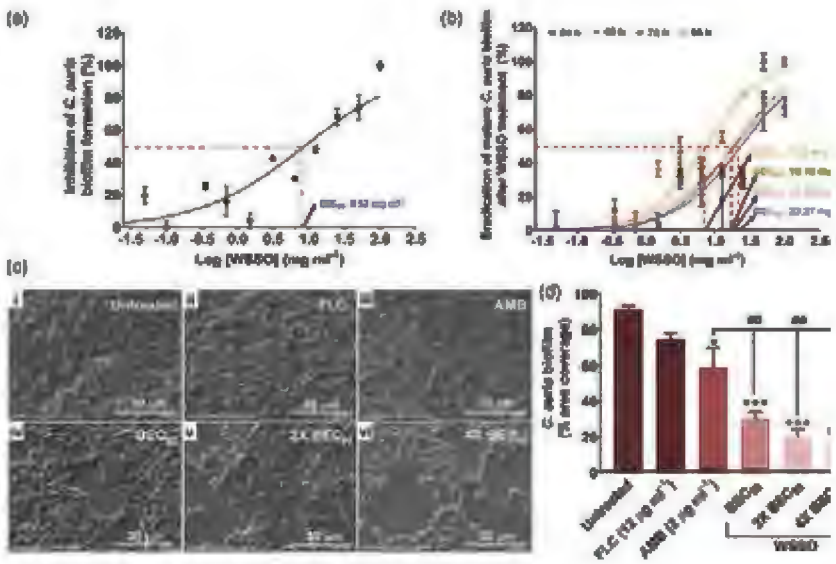


Fig. 4. WSSO can both inhibit and eradicate *C. auris* biofilm. DRCs from non-linear regression analyses of the dose-dependent, and dose and time dependent effects of WSSO treatment on *C. auris* biofilm formation (a) and eradication (b), respectively. (c) Representative SEM images of untreated *C. auris* biofilm (i) and those treated with FLC (12 µg ml-1) (ii), AMB (2 µg 751 ml-1) (iii) and BEC50 (iv), 2X BEC50 (v) and 4X BEC50 (vi) concentrations of WSSO. (d) Quantitative representation of the data in (C) as percent area *C. auris* biofilm coverage, determined in the FESEM images through (Fiji is Just) Image J software. The statistical significance between different groups was analyzed through on-way ANOVA and denoted as * and *** for p value < 0.05 and 0.001, respectively when compared to untreated biofilms.

Dose and Method of Use of Candifade:

Dose and Frequency	**Apply gently over the affected area, twice a day on clear skin**
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://pubmed.ncbi.nlm.nih.gov/37096387/

Tablet

PSOROGRIT सोरोग्रिट

Introduction to Psoriasis:

Psoriasis is a long-lasting, noncontagious autoimmune disease characterized by raised areas of abnormal skin. These areas are red, pink, or purple, dry, itchy, and scaly. Psoriasis varies in severity from small, localized patches to complete body coverage. Injury to the skin can trigger psoriatic skin changes at that spot, which is known as the Koebner phenomenon.

The five main types of psoriasis are plaque, guttate, inverse, pustular, and erythrodermic. Plaque psoriasis, also known as psoriasis vulgaris, makes up about 90% of cases. It typically presents as red patches with white scales on top. Areas of the body most commonly affected are the back of the forearms, shins, navel area, and scalp. Guttate psoriasis has drop-shaped lesions. Pustular psoriasis presents as small, non-infectious, pus-filled blisters. Inverse psoriasis forms red patches in skin folds. Erythrodermic psoriasis occurs when the rash becomes very widespread, and can develop from any of the other types. Fingernails and toenails are affected in most people with psoriasis at some point in time. This may include pits in the nails or changes in nail color.

Psoriasis is generally considered a genetic disease triggered by environmental factors. If one twin has psoriasis, the likelihood of the other twin being affected is three times higher if they are identical twins compared to non-identical twins.This suggests that genetic factors predispose to psoriasis. Symptoms often worsen during winter and with certain medications, such as beta blockers or NSAIDs. Infections and psychological stress can also play a role. The underlying mechanism involves the immune system reacting to skin cells. Diagnosis is typically based on the signs and symptoms.

There is no known cure for psoriasis, but various treatments can help control the symptoms These treatments include steroid creams, vitamin D3 cream, ultraviolet light, immunosuppressive drugs, such as methotrexate, and biologic therapies targeting specific immunologic pathways. About 75% of skin involvement improves with creams alone. The disease affects 2–4% of the population. Men and women are affected with equal frequency. The disease may begin at any age, but typically starts in adulthood. Psoriasis is associated with an increased risk of psoriatic arthritis, lymphomas, cardiovascular disease, Crohn's disease, and depression. Psoriatic arthritis affects up to 30% of individuals with psoriasis.

With a prevalence of 0.44-2.8 per cent in India, it commonly affects individuals in their third or fourth decade with males being affected two times more common than females1.

Psoriasis significantly impairs the quality of life of patients and their families resulting in great physical, emotional and social burden.

Psoriasis can occur at any age, although it is more frequent in adults and commonly appears for the first time between the ages of 15 and 25 years. Approximately one third of people with psoriasis report being diagnosed before age 20. Psoriasis affects both sexes equally.

People with inflammatory bowel disease such as Crohn disease or ulcerative colitis are at an increased risk of developing psoriasis.

While no cure is available for psoriasis, many treatment options exist. Topical agents are typically used for mild disease, phototherapy for moderate disease, and systemic agents for severe disease. There is no evidence to support the effectiveness of conventional topical and systemic drugs, biological therapy, or phototherapy for acute guttate psoriasis or an acute guttate flare of chronic psoriasis.

Ingredients and Medicinal Uses of Psorogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Neem (Lf.)	Azadirachta indica	Charm Vikar Har, Rakt dosh Har, Vishghna	• Cures skin diseases Anti-Poisonous	100 mg
Giloy (St.)	*Tinospora indica*	Rakt Dosh Har, Vishghna	• Anti-Poisonous	100 mg
Amaltas (Fr.)	*Cassia fistula*	Kusthaghna, kushtha Shodhak	• Cures skin diseases	100 mg
Sirisha (Bk.)	*Albizia lebbeck*	Vishghna, Twak Ddosh Har	• Anti-Poisonous	50 mg
Moringa (Lf.)	*Moringa pterygosperma*	Shoph, Vidradhi Har	• Anti-inflammatory Anti-abscess	30 mg
Nagarmotha (Rz.)	*Cyperus scariosus*	Pachak, Twag Dosh Har	• Cures skin diseases	20 mg
Karanj (Sd.)	*Caesalpinia bonducella*	Kushthgna, Shodhak	• Cures skin diseases	40 mg
Indrajav (Sd.)	*Holarrhena antidysentrica*	Visarp, Kustha Har	• Cures skin diseases	20 mg
Daruhaldi (Wl. Pt.)	*Berberis aristata*	Charm Vikar Har	• Cures skin diseases	20 mg
Fine powder of:				
Rasa Manikya	Classical Preparation	Kusthaghna, Visarp Har	• Cures skin diseases	20 mg

Psorogrit is Useful in:

- **Psoriasis**
- **Eczema**

Psorogrit: Description in Classical Texts:

Psorogrit is a herbal remedy composed of neem, giloy, amaltas, siras, moringa, nagarmotha, karanj, indrajau, daruhaldi and fine powder of ras manikya which have preventive and curative properties in the treatment of psoriasis and psoriatic like lesions

Neem pacifies vata, pitta, kapha doshas; has a hot potency; katu vipaka. And light property. It helps in management of skin diseases, nausea, polyuria, fatigue, thirsty, cough,fever, anorexia, ulcer, worm infestation.

Giloy is pungent, bitter, astringent, in taste. Physical property is lightness. It's vipaka is madhur and this drug is hot in potency. It pacifies vata, pitta, kapha doshas and can act in skin diseases, indigestion, thirst, polyuria, cough, anemia, jaundice, gout, fever, vomiting, asthma, hemorrhoids, dysuria, heart ailments.

Amaltas is sweet in taste with cold potency, heavy Property and madhur vipaka. It pacifies pitta and kapha doshas and acts as a laxative. Maybe used in management of fever, heart ailments, epistaxis, tympanitis, colic, and diseases caused by vitiation of vata.

Sirisha is sweet, bitter, astringent in taste, and hot in potency. It pacifies vata, pitta, kapha doshas and can cure edema, skin ailments, ulcer etc.

Moringa has pungent, bitter tastes; light, dry, sharp properties, hot potency and katu vipaka. It is kapha and vat dosha pacifying and good in alleviating skin diseases.

Nagarmotha is pungent, bitter, astringent in taste. This drug is hot in potency. It pacifies vata, pitta, kapha doshas and is used in skin diseases, diseases of blood, thirst and fever. It acts as an astringent, appetizer, digestive, anthelmintic.

Karanj is pungent in taste and physical property is dryness and sharpness. It has hot potency and pacifies kapha dosha. It can cure skin diseases, vaginal diseases, flatulence, abdominal tumor, ulcer etc.

Indrayav is pungent and astringent, in taste; with cold potency and pacifies pitta and kapha doshas. Physical property is dryness. This drug is used in conditions like: skin diseases, hemorrhoids, thirst and indigestion.

Daruhaldi is pungent, bitter in taste. Physical property is dryness. It has hot potency and pacifies pitta dosha. Useful in throat diseases, eye and ear ailments.

Rasa Manikya is mentioned in Siddha Bheshaja

Manimala. It is made by Shuddha Haritala powdered and kept within the sheets of Abhraka and heated till red hot to obtain manikya varna. This drug is highly potent and indicated in fever of vata and kapha and is useful in skin diseases.

Scientific Evidence of Psorogrit:

The efficacy of Psorogrit administered orally and Divya Taila administered topically have been evaluated in mouse models of 12-O-Tetradecanoylphorbol-13-acetate (TPA)-induced psoriasis like lesions and imiquimod-induced psoriasis.

A. TPA-induced psoriasis-like lesions:

Topical application of TPA leads to development of psoriasis-like skin lesions. In this study, TPA (2.5 µg) dissolved in acetone was applied on the right ear of the mice every alternate day for eleven days. This disease induction protocol led to the increase in ear thickness and ear edema as the evident macroscopic findings and epidermal hyperplasia, dermal inflammation, elongated rete ridges, and an increase in epidermal thickness as the major microscopic observations, when compared with normal animals. The combined administration of Psorogrit by oral route and Divya Taila by topically route mitigated the observed gross and histopathological changes induced with TPA. Accordingly, Psorogrit and Divya Taila might be promising therapies for patients afflicted with psoriasis.

B. Imiquimod-induced psoriasis:

Patanjali Research Foundation has done detailed research on efficacy of Psorogrit in psoriasis. The combination of Psorogrit and Divya Taila was tested to elucidate its anti-psoriatic efficacy in a mouse model of Imiquimod (IMQ)-induced psoriasis, which closely mimics the phenotypic and histological alterations as found in human plaque-type psoriasis. In this model, the commercially available 5% Imiquimod cream was topically applied on the shaved back and right ear of BALB/c mice, once a day for 8 consecutive days. This led to the development of hallmark histopathological lesions of psoriasis including abnormal epidermal proliferation, hyperplasia, inflammatory cell infiltration and elongated rete ridges in the skin of the back and ear, which were clinically manifested as a significant increase in thickness and punch weight of the right ear in diseased animals. Additionally, the expression of epidermal thickening marker gene KRT17 was found to be elevated in psoriatic mice. Further, Imiquimod also led to systemic inflammation which resulted in an abnormal increase in the spleen weight of diseased animals. The concomitant treatment of oral administration of Psorogrit and topical application of Divya Taila for a period of 8 consecutive days, significantly attenuated the phenotypic, systemic and histological abnormalities triggered by Imiquimod application. Thus, the combination of Psorogrit and Divya Taila has a promising anti-psoriatic potential and could be used as an effective therapeutic agent for the treatment of psoriasis.

Analytical study of Psorogrit was conducted to confirm the presence of phytochemical. The detailed study on High Performance Liquid Chromatography (HPLC) confirms the presence of gallic acid, magnoflorine, protocatechuic acid, methyl gallate, vanillic acid, palmatine, berberine, rutine, β ecdysone, and cinnamic acid as shown in Fig. 1

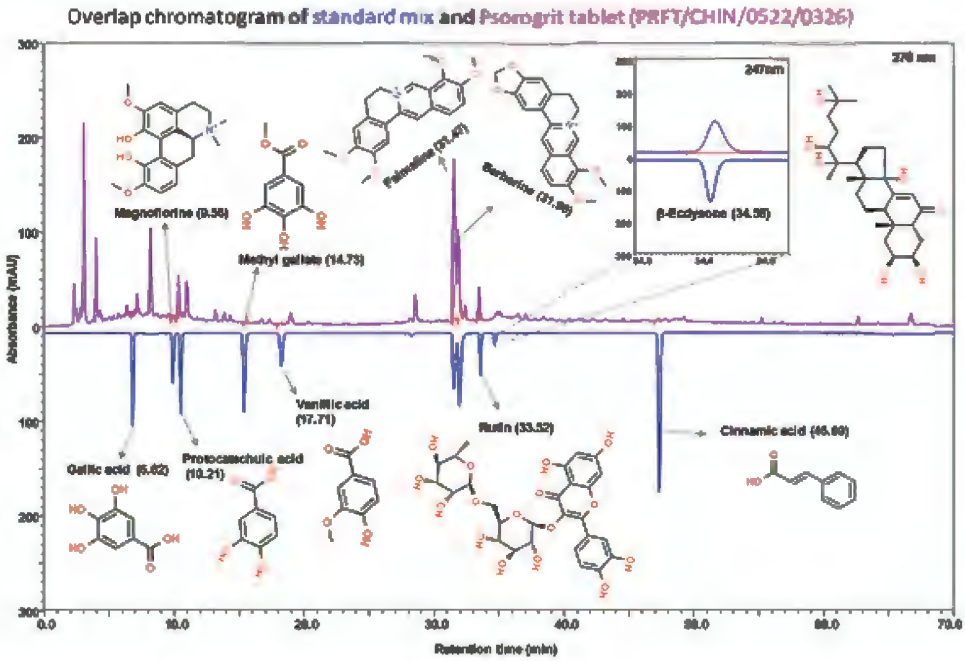


Fig. 1: High Performance Liquid Chromatography (HPLC) with Photo Diode Array Detecter (PDA) confirms the presence of gallic acid at a retention time of 6.62 minutes, magnoflorine at 9.56 minutes, protocatechuic acid 10.21 minutes, methyl gallate 14.73 minutes, vanillic acid 17.71 minutes, palmatine 31.47 minutes, berberine 31.90 minutes, rutine 33.52 minutes, β ecdysone 34.56 minutes, and cinnamic acid 46.69 min. β ecdysone showed the maximum absorbance (λmax) at 274 nm whereas other compounds λmax is 270nm.

Dose and Method of Use of Psorogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

एलोकांति जेल
ALOE KANTI GEL

Introduction to Skin Disorders:

A rash is defined as a widespread eruption of skin lesions; a rash can affect one part of the body or cover a large area. Rashes can also be dry, moist, bumpy, smooth, cracked, or blistered. They can involve pain, itching, and color changes. Some rashes will clear up on their own, some respond to home remedies, but others might be a sign of something more serious that needs medical attention. Rashes can happen for many reasons, including skin infections, allergies, and medications. They can also result from bacterial, fungal, viral, or parasitic infections and other diseases. Itchy skin is an irritating sensation that makes you want to scratch. It's also called pruritus. Itchy skin is often caused by dry skin and is common in older adults, as skin tends to become drier with age. Depending on the cause of your itchiness, your skin may look no different than usual or it may be inflamed, rough or have bumps. Repeated scratching can cause raised thick areas of skin that might bleed or become infected. Many people find relief with self-care measures such as moisturizers, gentle cleansers and lukewarm baths. Eczema is a condition in which patches of skin become inflamed, itchy, cracked and rough.

Blistering of the skin, the interior of the mouth, nose, throat, eyes, and genitals are symptoms of the illness pemphigus. The immune system incorrectly targets cells in the mucous membranes and the epidermis of the skin in the autoimmune illness pemphigus. Desmogleins are proteins that link skin cells together, and people with the condition develop antibodies against these proteins. Skin becomes brittle when these linkages are broken, and fluid can accumulate between its layers and cause blisters. Pemphigus comes in a variety of forms; however, the two most common ones are:
Pemphigus vulgaris often impacts the skin and mucous membranes, including the mouth's inside.

Pemphigus foliaceus, a skin-specific condition.
Pemphigus has no known treatment, however in many instances, it is controllable with medications.

The disorder known as Raynaud's phenomenon causes the blood vessels in the extremities to constrict, reducing blood flow. The fingers and toes are typically affected by the "attacks" or episodes. Rarely, assaults might happen in other places, such the nose or ears. Attacks typically result from exposure to cold or psychological stress. Raynaud's phenomenon comes in two varieties: main and secondary. The secondary type is connected to another health problem, particularly autoimmune illnesses like lupus or scleroderma, while the main form has no

recognised aetiology. The secondary variety typically requires more intensive therapy since it is more dangerous. Most individuals may minimise their symptoms by making lifestyle adjustments like keeping warm, but in extreme instances, recurrent bouts can cause gangrene or skin sores.

As a result of blocked hair follicles beneath the skin, acne is a frequent skin disorder. Dead skin cells and sebum, an oil that helps prevent skin from drying out, clog pores, causing lesions to appear, often known as pimples or zits. The eruptions often affect the face, but they can also affect the back, chest, and shoulders.

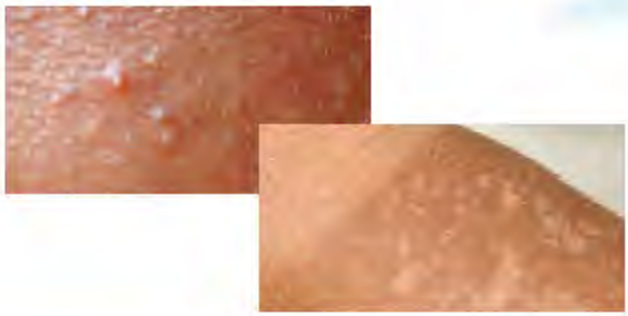
Acne is an inflammatory condition that affects the skin's sebaceous (oil) glands and hair follicles, which are home to fine hairs. Sebum produced by the sebaceous glands in healthy skin is released onto the skin's surface through the pore, a follicular opening. The follicle is lined with keratinocytes, a kind of skin cell. The keratinocytes normally ascend to the skin's surface during skin cell shedding. Hair, sebum, and keratinocytes clump together in the pore of an acne patient. As a result, the keratinocytes are kept from shedding and sebum is kept from penetrating the skin's surface. Inflammation, including swelling, redness, heat, and pain, is brought on by bacteria that ordinarily reside on the skin and can proliferate in clogged follicles when oil and cells are present. Lesions or pimples are produced when the wall of the clogged follicle collapses, spilling germs, skin cells, and oil onto the neighbouring skin.

Ingredients and Medicinal Uses of Aloe Kanti Gel:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 ml contains
Aloevera Juice (Lf.)	*Aloe barbadensis*	Twak Snehak, Charm Rog Har, Vranghna	• Cures skin diseases • Wound healing	78 %
Dry Extract of:				
Haldi (Rz.)	*Curcuma longa*	Vishghna, Varnya, Sthanik Shoth,Vedna Har	• Anti-poisonous • Improves complexion • Anti inflammatory • Reduces pain	0.10 %
Papaya (Fr.)	*Carica papaya*	Pidikahar	• Alleviates boils/ pustules	0.10 %
Neem (Lf.)	*Azadirachta indica*	Kushthaghna, Twak Vikar Har	• Cures skin diseases	0.10 %
Manjishtha (St.)	*Rubia cordifolia*	Twak Dosh Har,Vran Ropak	• Cures skin diseases • Wound healing	0.10 %
Oil of:				
Wheat Germ (Fr.)	*Triticum sativum*	Twak Poshak	• Nourishes skin	0.50 %
Ashwagandha (Sd.)	*Withania somnifera*	Balya, Rasayan	• Strengthening • Rejuvenating	0.50 %

Aloe Kanti Gel is Useful in:

- **Skin Problems**
- **Enhances Skin Tone**
- **Skin Reconditioner**



Aloe Kanti Gel : Description in Classical Texts:

It is an Ayurvedic proprietary medicine which comes under sub category named saundarya prasadak.

Aloevera is sweet, bitter in taste; has lightness property and cold potency; pacifies Vata, Pitta doshas. It is useful in eruptions, abdominal tumor, hepatomegaly, eye diseases, blood diseases, skin diseases.

As bhavprakash nighntu said, Haldi is pungent and bitter in taste, and hot potency. It has dry property. it pacifies pitta dosha. Useful in skin diseases, polyuria, edema, anemia, ulcer, disease caused by vitiation of blood.

Papaya has pungent and bitter taste with qualities of lightness, dryness and sharpness. The potency is hot and vipaka is katu. It pacifies kapha vata doshas.
Neem Patti has cold potency and light property. it pacifies vata, pitta, kapha doshas, and has katu vipaka. It acts as an astringent. It is helpful in fatigue, thirsty, cough, fever, anorexia, worm infestation, ulcer, vomiting, skin disease, nausea, polyuria.

Wheat Germ has sweet taste with qualities of heaviness and sliminess; cold potency and madhura vipaka. Balances vata and pitta doshas.

Ashwagandha is pungent and bitter in taste, and hot potency, with dry property. it pacifies pitta dosha. It is useful in skin diseases, polyuria, edema, anemia, ulcer, disease caused by vitiation of blood

Manjishta is sweet, pungent and astringent in taste & hot potency It pacifies kapha dosha. It has heavy property and is helpful in poisoning, edema, vagina diseases, bloody diarrhea, erysipelas, disease caused by vitiation of blood, polyuria, it improves complexion and voice.

Scientific Evidence of Aloe Kanti Gel:

For the study of phytochemicals present in Aloe Kanti Gel, High Performance Liquid Chromatography (HPLC) analysis was conducted at 300 nm wavelength as shown in Fig. 1. The presence of 2”-O-feruloyaloesin at 24.246 minutes, aloin B at 29.363 minutes, aloin

A at 32.719 minutes, and 7-O-methylaloeresin at 31.055 minutes confirm the presence of Aloevera as one of the major components.

For other phytochemicals present in Aloe Kanti Gel, another Reverse Phase High Performance Liquid Chromatography (RP-HPLC) with Photo Diode Array (PDA) detector was developed. RP-HPLC analysis at 250 nm wavelength confirms the presence of 4-hydroxy benzoic acid at 19.29 minutes. Similarly, at 420 nm wavelength bisdemethoxycurcumin, demethoxycurcumin, and curcumin were observed at 51.83, 52.84, and 53.84 minutes respectively. as shown in Fig. 2

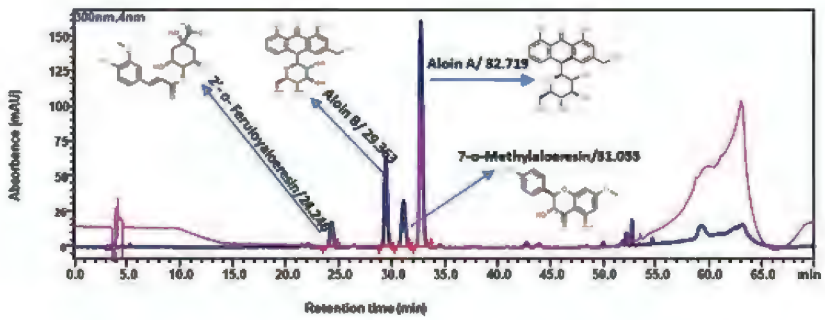


Fig 1: High Performance Liquid Chromatography (HPLC) analysis at 300 nm wavelength of Aloe Kanti Gel shows the presence of 2"-O-feruloyaloesin, aloin B, aloin A, and 7-O-methylaloeresin which are main constituents of Aloevera.

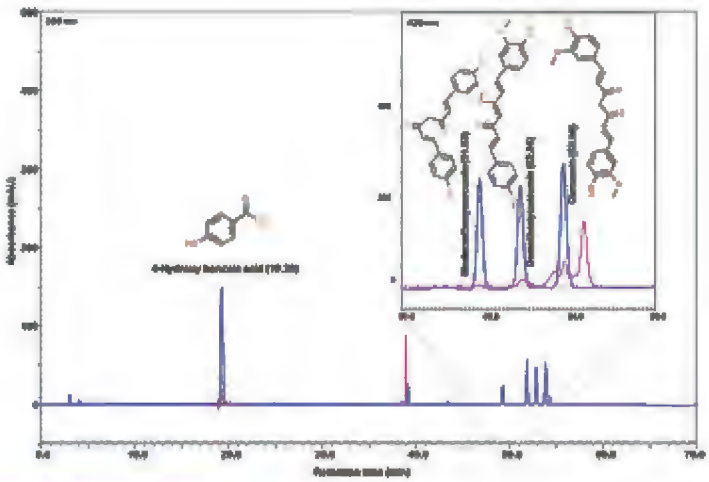


Fig 2: High Performance Liquid Chromatography (HPLC) analysis with Photo Diode Array Detector (PDA) Aloe Kanti Gel confirms the presence of 4-hydroxy benzoic acid at 250 nm wavelength, bisdemethoxycurcumin, demethoxycurcumin and curcumin at 420 nm wavelength.

Dose and Method of Use of Aloe Kanti Gel:

For external use only.
As directed by the physician.

Capsule

AYU-PRIME आयु-प्राइम

Introduction to Ageing:

Holistic healthcare is complete or total patient care that considers the physical, emotional, social, economic, and spiritual needs of the person, his or her response to illness and the effect of the illness on the ability to meet self-care needs. People with intellectual and developmental disabilities (IDD), frequently experience clinical comorbidities that require treatment across a range of disciplines, access a range of long term services and supports, and rely on an array of natural supports for their emotional, social and other needs. For these reasons they require coordination and integration of care that will promote improved health outcomes, improved patient satisfaction and reduced healthcare costs. Holistic health care offers the promise of multidisciplinary, coordinated whole-person care for people with IDD and seeks optimal quality of life as a principle patient outcome.

Holistic health does incorporate complementary therapies that have been scientifically proven to work, and like alternative medicine, it focuses on wellness and prevention, rather than just treating diseases. Holistic care address a wide variety of wellness concerns, and use a wide variety of clinically proven therapies — from surgery and pharmaceuticals, to dietary changes and exercise plans, to psychological and spiritual counseling. They might also recommend evidence-based alternative therapies, such as massage, acupuncture, and yoga, for supportive care.

Wellness is a big, important goal, and it can feel overwhelming. You know you should eat healthier foods, drink more water, hit the gym more often, sleep eight hours a night, give up your vices, and make more time for rest and relaxation. But the busyness of work and life can make it hard to prioritize self-care, and the more you think about what you "should" be doing differently, the more daunting wellness can seem.

Holistic doctors empower you with the education and motivation to make better choices. Rather than suggesting a long list of lifestyle changes, they include you in the conversation and help you determine which changes would make the greatest impact on your health. They help you set wellness goals and then provide you with resources — whether that's a personalized plan or a referral to a specialist.

On a global scale, 'population ageing'—the process by which older cohorts become relatively prominent in a given population—was one of the most distinctive demographic events that marked the twentieth century and will undoubtedly remain an important trend throughout this century. Initially restricted to the more technologically developed countries,

population ageing has recently become apparent in much of the developing world as well. In the near future, virtually all nations will face population ageing, although at varying levels of intensity and in different time frames.

Around the turn of the twentieth century, life expectancy was less than 50 years in most industrialized nations. At the turn of the twenty-first century, it had risen by about 50% to exceed the 75-year limit. This dramatic rise happened mostly as a result of improved hygiene practices, success in averting epidemics and infectious diseases and a sharp fall in infant mortality. Clearly, modern technology has had an important role in improving human health and enabling a greater number of people to survive into old age. Not only biomedical sciences, but also innovations such as clean water and sanitation, waste treatment and disposal, improved diet and antibiotics have given us considerable control over the infectious and parasitic diseases that have in the past taken countless lives, particularly those of children. As a result, chronic degenerative diseases—that very few people lived long enough to experience in the past—have replaced infectious and parasitic diseases as the primary cause of death in the wealthier parts of the world. But while this trend is being observed on a worldwide scale, life expectancy at birth remains conspicuously unequal, not only along the north–south axis, but also between social milieus in the 'affluent' parts of the world.

Ageing refers to the various processes of wear and tear that affect us continuously. Even if people argue over what drives any or all of those processes, they all seem to agree on how they affect us: perceptibly as well as imperceptibly, they make us prone to falling apart. Not surprisingly, the search for remedies against the ageing process, and the study of human ageing itself, has a long history in numerous cultural traditions around the world. Traditional Chinese medicine has always maintained a keen interest in the arts of extending human lifespan and attaining immortality in the flesh. 'Fountain of youth' remedies abound in Chinese medicine, and legends of immortals living on mountaintops have been a constant in its folklore. Western science also has a long history of preoccupation with the arts of prolonging human lifespan.

The most visible aspect of this change is the success of the anti-ageing industry that caters to the needs of the elderly. Like alternative medicine, it owes much of its success to its fundamental, albeit ambiguous, relationship with science. This particular sector in consumer society is shrouded with an aura of science that is used for the promotion of a variety of goods. It thrives on symbolic uses of science, while passing over its requirements for experimental evidence, peer review and official regulations. The aura and the discourse of science are skilfully applied for product enhancement in response to a fast-growing demand from the ageing public.

The anti-ageing market is replete with products: yoghurt cures, enema regimens, cell injections, magnetic devices, skin creams, herbal elixirs, glandular extracts, hormonal therapies, vitamin supplements, fad diets and exercise programmes. They give us anti-oxidants to neutralize oxygen-free radicals; chelators to bind heavy metal ions such as copper and iron; dehydroepiandrosterone to rejuvenate the immune system, improve brain function and relieve stress; growth hormone to increase muscle mass and function; retinoic acid to

decrease skin wrinkling, and many more.

Biogerontology has grown into a subfield in biology in which researchers not only study the complex causes for the physiological failure to maintain homeostasis, but also the ways and means to slow down, arrest or even reverse degenerative processes in living organisms.

As a considerably more ambitious agenda, the decelerated ageing approach seeks to slow down the fundamental processes of ageing to the extent that average life expectancy and maximum lifespan are increased.

Ingredients and Medicinal Uses of Ayuprime:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Fine Powder of:				
Swarn Bhasma	Classical Preparation	Rasayana, Medhya	• Rejuvenating • Promotes intellect	33.3 mg
Rajat Bhasma	Classical Preparation	Dhatu Ksaya	• Alleviates depletion of dhatus	132.4 mg
Basera Mukta Pishti	Classical Preparation	Rakta Pitta	• Alleviates bleeding disorders	381.0 mg
Hirak Bhasma	Classical Preparation	Balya, Rasayana	• Strengthening • Rejuvenating	3.3 mg
Dry Extract of:				
Ashwagandha (Rt.)	*Withania somnifera*	Rasayan, Balya	• Rejuvenating • Strengthening	50.0 mg

Ayuprime is Useful in:

- **General Holistic Health**
- **Anti Ageing**

Ayuprime: Description in Classical Texts:

Patanjali has prepared Ayuprime by incorporating the essence of Ayurvedic knowledge especially in anti-ageing therapies. Bhavaprakasha has included Ashwagandha, under Guduchyadi varga, is vatakaphahara in action, having bitter and astringent tastes. It is hot in potency and promotes strength and is rejuvenating as well.

Swarn Bhasma is rejuvenating and promotes intellect. Rajat bhasma has astringent and sour tastes as per Rasa Ratna Samucchaya. It has cold and unctuous qualities and pacifies vata and kapha doshas and scrapes off accumulated doshas from the body and also promotes intelligence. Baera Mukta pishti can alleviate mano doshas. It is prepared by taking mukta bhasma and triturate with rosewater. It pacifies pitta dosha. Hirak Bhasma pacifies all three doshas and is strengthening and rejuvenating.

Scientific Evidence of Ayuprime:

Inductively Coupled Plasma Mass Spectrometry (ICP-MS) with Kinetic Energy Discrimination (KED) collision mode confirms the presence of Gold (Au), Silver (Ag), and Calcium (Ca) as shown in Fig. 1.

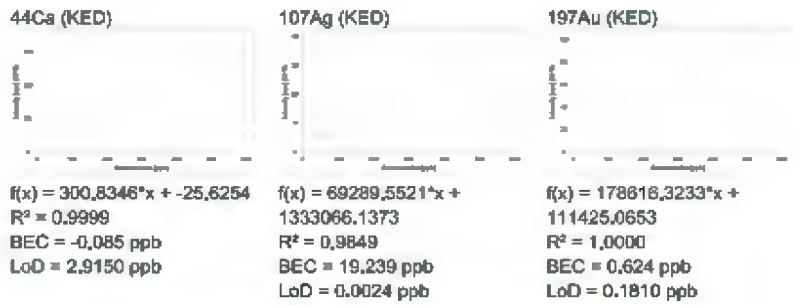


Fig. 1: Inductively Coupled Plasma Mass Spectrometry (ICP-MS) analysis calibration curve at different concentration. R^2 value greater than 0.98 confirms the accuracy and presence of calcium (Ca), silver (Ag), and Gold (Au).

Dose and Method of Use of Ayuprime:

Dose and Frequency	1 capsule, in a day
Adjuvant	Luke warm water
Time of Administration	Pre meals
Or as directed by the physician.	

Capsule

IMMUNOGRIT GOLD
इम्यूनोग्रिट गोल्ड

Introduction to Auto Immune Disease:

Autoimmune diseases are the group of diseases in which the immune system wrongly assaults healthy cells and tissues in the body, resulting in chronic inflammation and tissue damage. Such diseases can have a wide variety of symptoms and problems because they impact various organs and systems. Autoimmune diseases develop when the immune system, which is meant to protect the body from foreign invaders such as germs and viruses, malfunctions and begins attacking the body's own cells and tissues. The specific origins of autoimmune illnesses are unknown, although they are thought to be the consequence of a mix of genetic predisposition and environmental stimuli.

The immune system recognises foreign molecules called antigens and creates antibodies to target and remove them in an appropriate immunological response. In autoimmune illnesses, however, the immune system misidentifies self-antigens as foreign and develops an immune reaction against them. This immune reaction causes prolonged inflammation and damage to the organs or tissues involved. Over 80 autoimmune disorders have been identified, each with its unique set of target tissues and symptoms. Rheumatoid arthritis, systemic lupus erythematosus, multiple sclerosis, type 1 diabetes, and celiac illness are some of the common examples. These disorders can affect a variety of organs and systems, including the joints, skin, kidneys, neurological system, endocrine system, and digestive tract. The symptoms of autoimmune disorders vary greatly depending on the illness and the organs involved. Fatigue, joint discomfort, muscular weakness, skin rashes, fever, and gastrointestinal issues are all common symptoms.

Autoimmune disorders can potentially cause significant organ damage and life-threatening consequences in certain circumstances. Because of the variety of symptoms and overlap with other ailments, diagnosing autoimmune diseases can be difficult. A full medical history review, physical examination, and laboratory testing are routinely performed by healthcare practitioners. Blood tests that assess particular antibodies, inflammatory indicators, and autoimmune-related proteins can help with diagnosis. Imaging examinations and tissue biopsies may also be conducted to determine organ involvement and severity. The goal of autoimmune disease treatment is to relieve symptoms, decrease inflammation, and prevent additional tissue damage. Treatment regimens frequently adjust to the specific autoimmune disorder and organs involved. Immunosuppressive medicines are commonly used to suppress the immune response, Non Steroidal Anti-Inflammatory Drugs (NSAIDs) to

reduce pain and inflammation, and lifestyle changes to promote general health and well-being. Autoimmune illnesses have significant effects on the quality of life of persons and can result in long-term impairment. These disorders frequently need continuing medical treatment, monitoring, and symptom management.

Furthermore, the chronic nature of autoimmune disorders can cause emotional and psychological difficulties, thereby compromising mental health and general well-being. In short, autoimmune diseases are a collection of conditions in which the immune system incorrectly attacks the body's own cells and tissues. These disorders can cause persistent inflammation and tissue damage by affecting many organs and systems. Autoimmune illnesses are caused by a complicated mix of hereditary and environmental factors. Individuals living with autoimmune disorders must have an early diagnosis, proper therapy, and continuing care to minimise symptoms and preserve a high quality of life.

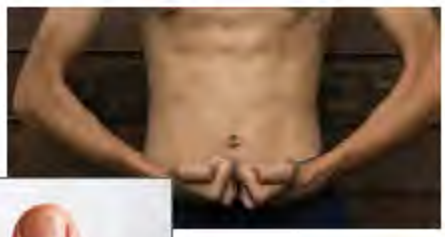
Ingredients and Medicinal Uses of Immunogrit Gold:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Dry Extract of:				
Vidarikand (Tuber)	*Pueraria tuberosa*	Poshak, Shoth Har	• Nourishing • Anti-inflammatory	45.6 mg
Meda (Rt.Bb.)	*Polygonatum verticillatum*	Dhatu Vardhak, Rakta dosh Har	• Nourishes body tissues • Cures diseases of the blood	22.8 mg
Shatavari (Rt.)	*Asparagus racemosus*	Agni Vardhak, Rasayan, Balya	• Increases digestive power • Rejuvenating • Strengthening	22.8 mg
Kakoli (Rt. Bb.)	*Roscoca procera*	Brimhan, Shosh Har	• Nourishing • Cures progressive wasting	22.8 mg
Kshirakakoli (Rt. Bb.)	*Lilium polyphyllum*	Dhatu Vardhak, Rakta Dosh Har	• Nourishes body tissues • Cures diseases of the blood	22.8 mg
Riddhi (Rt. Bb.)	*Habenaria intermedia*	Kshay Har, Brimhan	• Cures Phthisis • Nourishing	22.8 mg
Varahikand (Tb. Rt.)	*Dioscorea bulbifera*	Rakta Sangrahak, Dhatu Poshak	• Styptic • Nourishes body tissues	22.8 mg
Bala (Rt.)	*Sida cordifolia*	Poshak, Baya	• Nourishing • Strength-promoting	22.8 mg
Safed Musali (Rt.)	*Chlorophytum borivillanum*	Dhatu Vardhak, Balkarak	• Increases body tissues • Strengthening	22.8 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Shuddh Konch (Sd.)	*Mucuna pruriens*	Nadi Balya	• Gives strength to the nervous system	22.8 mg
Ashwagandha (Rt.)	*Withania somnifera*	Rasayan, Balkarak	• Rejuvenating • Strengthening	172.8 mg
Fine Powder of:				
Rajat Bhasma	Classical Preparation	Brimhan, Vay Sthapak	• Nourishing • Anti-aging	20 mg
Mukta Pishti	Classical Preparation	Hridya, Kshayaghna	• Cardiotonic • Anti-phthisis	20 mg
Swarna Bhasma	Classical Preparation	Rasayan, Kanti Vardhak	• Rejuvenating • Improves complexion	1.08 mg
Vasant Kusumakar Ras	Classical Preparation	Balya, Uttejak, Rasayan	• Strengthening • Stimulant • Rejuvenating	10 mg

Immunogrit Gold is Useful in:

- **General Debility**
- **Against Autoimmune Diseases**



Immunogrit Gold: Description in Classical Texts:

Immunogrit gold is a herbomineral formulation that is effective in maintaining the physiological role of immunity in preventive and curative effects. Vidarikand is sweet in taste. Mentioned under Guduchyadi varga in Bhava prakasha, this drug has the qualities of unctuousness and heaviness. It has cold potency. This drug is nourishing and pacifies vata and pitta doshas. It has rejuvenating action.

Bhava prakasha mentioned Meda under Hareetakyadi varga. It is sweet in taste and has the qualities of heaviness in it. It is cold in potency. It pacifies pitta and vata doshas and is nourishing in nature.

Shatavari which has bitter and sweet tastes, is heavy and unctuous in quality. Its vipaka is madhura and it is cold in potency. It pacifies

vata and pitta doshas. It is rejuvenating and promotes strength as well. Bhava prakasha mentioned Kakoli under Hareetakyadi varga, and it is sweet in taste and is heavy in quality, with cold potency.

Bhava prakasha mentioned Kshirakakoli under Hareetakayadi varga. This drug is sweet in taste and has madhura vipaka. It has cold potency. This drug has vata pitta dosha pacifying effects and is nourishing in action. Riddhi is mentioned under Hareetakyadi varga in Bhava prakasha. This plant is a component among the ashta varga plants that has known rejuvenating properties. It has sweet taste and heavy in quality. It pacifies all three doshas. It promotes strength of individual.

Varahikand has sweet and bitter tastes, with katu vipaka. It is hot in potency and has qualities of lightness and unctuousness in it. This drug is also rejuvenating and gives nourishment. Bala is included in Guduchyadi varga in Bhava prakasha. It has sweet taste and madhura vipaka, and is heavy and unctuous in nature. It pacifies vata dosha and promotes strength.

Safed musali is sweet and bitter in taste with hot in potency. It is heavy in quality and has nourishing, bulk-promoting and rejuvenating effects. Shuddh konch is sweet and bitter in taste with madhura vipaka. It has heaviness and unctuousness as qualities, with hot potency and balances all three doshas.

Bhava prakasha has included Ashwagandha, under Guduchyadi varga, is vatakaphahara in action, having bitter and astringent tastes. It is hot in potency and promotes strength and is rejuvenating as well.

Rajat bhasma has astringent and sour tastes as per Rasa Ratna Samucchaya. It has cold and unctuous qualities and pacifies vata and kapha doshas and scrapes off accumulated doshas from the body and also promotes intelligence. Mukta pishti can alleviate mano doshas and give strength to body. It is prepared by taking mukta bhasma and triturate with rosewater.

Swarna bhasma acts as immune booster. It is said to be rejuvenating and useful in various diseases. Vasant kusumakar rasa is a classical preparation mentioned in Rasendra Sara Sangraha and has various ingredients like bhasmas of swarna, rajata, vanga, loha, abhraka, pravala and mukta; processed in liquids like cow milk, ikshurasa, etc. It is an excellent rejuvenating and good for immunity.

Scientific Evidence of Immunogrit Gold:

To evaluate the photochemical present in Immunogrit gold, Ultra Performance Liquid Chromatography equipped with Quadrupole Time of Flight Mass Spectrometry (UPLC-QToF-MS) was used. This sophisticated state of the art instrument with reverse phase chromatography separates the phytoconstituent present in Immunigrot gold and identify them using the molecular mass. To further confirm the accuracy of the findings, molecular mass with its fragmentation are evaluated and compared with the available database. Total of about 80 minutes of analysis was performed using polar to mid polar mobile phase and compounds separated and identified are shown in Fig. 1 (A, B, C and D).

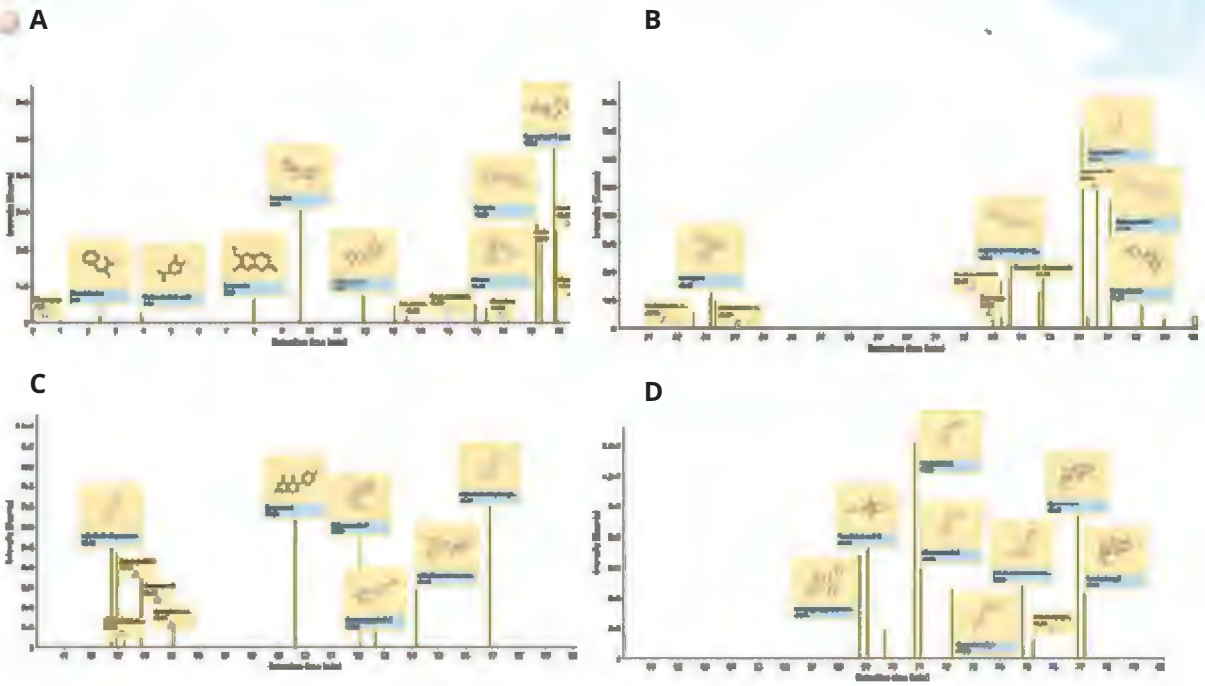


Fig 1: Ultra Performance Liquid Chromatography equipped with Quadrupole Time of Flight Mass Spectrometry (UPLC-QToF-MS) shows the compounds present in Immunogrit Gold. A, B, C and D determine the mass intensity graph from 0 to 20 minutes, 20 to 40 minutes, 40 to 60 minutes and 60 to 80 minutes respectively.

Dose and Method of Use of Immunogrit Gold:

Dose and Frequency	2 Capsules, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

IMMUNOGRIT

इम्यूनोग्रिट

Introduction to Immune System and Auto-Immune Diseases:

The immune system is a complex network of cells, tissues, and organs that collaborate to protect the body against pathogens such as bacteria, viruses, and parasites. It is essential for general health and its defense against infections and disorders. The immune system also helps in the identification and elimination of unusual cells, including malignant cells, so helping the body's defense against cancer. The immune system is divided into two parts: the innate immune system and the adaptive immune system. The innate immune system serves as the initial line of defense, providing rapid, nonspecific protection against a wide variety of infections. Physical barriers such as the skin, mucous membranes, and secretions keep infections out of the body. Pathogens are also detected and destroyed by cells such as neutrophils, macrophages, and natural killer cells.

The adaptive immune system, on the other hand, responds specifically to certain infections. It recognizes and remembers certain antigens (molecules present on pathogen surfaces) and performs a focused attack to remove them. The adaptive immune system is made up of specialized cells such as B and T cells. B cells make antibodies that attach to antigens and label them for destruction, whereas T cells assault infected cells directly or support other immune cells in their duties. The immune system works through a complex series of interactions between the various parts. Various signaling molecules, such as cytokines, are involved in these interactions, which help to manage the immune response. Immune system dysregulation can lead to immune disorders such as autoimmune illnesses (in which the immune system attacks the body's own cells) or immunodeficiency disorders (in which the immune system is impaired and unable to adequately protect against infections).

A strong immune system is crucial for general well-being. Nutrition, sleep, exercise, and stress management are all elements that impact immune function. A healthy diet rich in fruits, vegetables, whole grains, provides minerals, and antioxidants required to promote immunological function. Regular physical activity and enough sleep are also required for healthy immune system efficiency.

Autoimmunity disorders are a class of diseases in which the immune system mistakenly attacks healthy cells and tissues in the body, causing persistent inflammation and tissue damage. Because they affect several organs and systems, these illnesses can produce a wide range of symptoms and difficulties. Autoimmune illnesses occur when the immune system, which is supposed to protect the body from outside invaders like bacteria and

viruses, malfunctions and begins attacking the body's own cells and tissues. The specific causes of autoimmune diseases are unknown, although they are assumed to be the result of a combination of genetic predisposition and environmental stimuli. In an adequate immunological response, the immune system identifies foreign substances called antigens and produces antibodies to target and destroy them. However, in autoimmune diseases, the immune system misidentifies self-antigens as foreign and mounts an immune response against them. This immune response produces long-term inflammation and damage to the affected organs or tissues.

There are about 80 autoimmune illnesses, each with its own set of target tissues and symptoms. Some frequent instances are rheumatoid arthritis, systemic lupus erythematosus, multiple sclerosis, type 1 diabetes, and celiac disease. These disorders can affect a variety of organs and systems, including the joints, skin, kidneys, neurological system, endocrine system, and digestive tract. The symptoms of autoimmune disorders vary greatly depending on the illness and the organs involved. Fatigue, joint discomfort, muscular weakness, skin rashes, fever, and gastrointestinal issues are all common symptoms. Autoimmune disorders can potentially cause significant organ damage and life-threatening consequences in certain circumstances. Because of the variety of symptoms and overlap with other ailments, diagnosing autoimmune diseases can be difficult. A full medical history review, physical examination, and laboratory testing are routinely performed by healthcare practitioners.

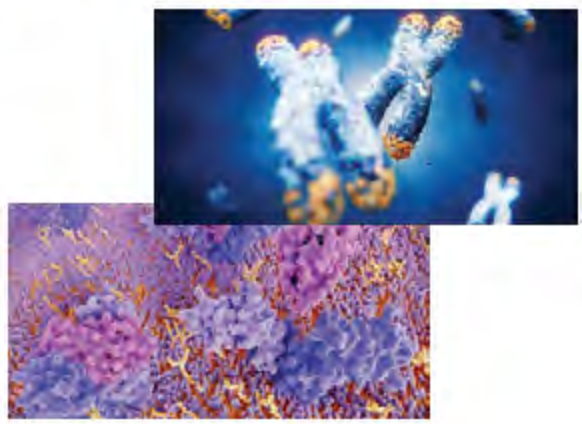
Ingredients and Medicinal Uses of Immunogrit:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Vidarikand (Tuber)	*Pueraria tuberosa*	Poshak, Shoth Har	• Nourishing • Anti-inflammatory	76 mg
Meda (Rt. Bb.)	*Polygonatum verticillatum*	Dhatu Vardhak, Rakta Dosh Har	• Nourishes body tissues • Cures diseases of the blood	38 mg
Shatavari (Rt.)	*Asparagus racemosus*	Agni Vardhak, Rasayan, Balya	• Increases digestive power • Rejuvenating • Strengthening	38 mg
Kakoli (Rt. Bb.)	*Roscoca procera*	Brimhan, Shosh Har	• Nourishing • Cures progressive wasting	38 mg
Kshirakakoli (Rt. Bb.)	*Lilium polyphyllum*	Dhatu Vardhak, Rakta Dosh Har	• Nourishes body tissues • Cures diseases of the blood	38 mg

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Riddhi (Rt. Bb.)	*Habenaria intermedia*	Kshay Har, Brimhan	• Cures phthisis • Nourishing	38 mg
Varahikand (Tb.Rt.)	*Dioscorea bulbifera*	Rakta Sangrahak, Dhatu Poshak	• Styptic • Nourishes body tissues	38 mg
Bala (Rt.)	*Sida cordifolia*	Poshak, Balya	• Nourishing • Strength-promoting	38 mg
Safed musali(Rt.)	*Chlorophytum borivillanum*	Dhatu Vardhak, Balkarak	• Increases body tissues, • Strengthening	38 mg
Shuddh konch (Sd.)	*Mucuna pruriens*	Nadi Balya	• Gives strength to nervous system	38 mg
Ashwagandha (Rt.)	*Withania somnifera*	Rasayan, Balkarak	• Rejuvenating • Strengthening	38 mg

Immunogrit is Useful in:

- **Immunomodulatory**
- **Weakness**
- **Rejuvenation**



Immunogrit: Description in Classical Texts:

Vidarikand is sweet in taste. Mentoned under Guduchyadi varga in Bhava prakasha, this drug has the qualities of unctuousness and heaviness. It has cold potency. This drug is nourishing and pacifies vata and pitta doshas. it has rejuvenating action.

Meda is placed under Hareetakyadi varga in Bhava prakasha. It is sweet in taste and has the qualities of heaviness in it. It is cold in potency. It

pacifies pitta and vata doshas and is nourishing in nature.

Shatavari is bitter and sweet in taste. It is heavy and unctuous in quality. Its vipaka is madhura and it is cold in potency. It pacifies vata and pitta doshas. It is rejuvenating and romotes strength as well.

Kakoli mentioned under Hareetakyadi varga in Bhava prakasha, is sweet in taste and is heavy in quality. It has cold potency.

Kshirakakoli is also mentioned Hareetakayadi varga in bhava prakasha. This drug is sweet in taste and has madhura vipaka. It has cold potency. This drug has vata pitta dosha pacifying effects and is nourishing in action.

Riddhi is mentioned under Hareetakyadi varga of bhava prakasha. This plant is a component among the ashta varga plants that his known rejuvenating properties. It has sweet taste and heavy in quality. It pacifies all three doshas. It promotes strength of individual.

Varahikand has sweet and bitter tastes. It has katu vipaka. It is hot in potency. It has qualities of lightness and unctuousness in it. This drug is also rejuvenating and gives nourishment.

Bala is included in Guduchyadi varga in Bhava prakasha. It has sweet taste and madhura vipaka. It is heavy and unctuous in nature. It pacifies vata dosha. It promotes strength.

Safed musali is sweet and bitter in taste. It is hot in potency. It is heavy in quality and has nourishing, bulk-promoting and rejuvenative effects.

Shuddh konch is sweet and bitter in taste with madhura vipaka. It has heaviness and unctuousness as qualities. It has hot potency and balances all three doshas.

Bhavaprakasha has included Ashwagandha in Guduchyadi varga. This drug has astringent and bitter taste and madhura vipaka. It pacifies vata and kapha doshas. It gives strength and is rejuvenating also.

Scientific Evidence of Immunogrit:

Patanjali Research Foundation, has tested an Ayurveda-inspired herbo-mineral formulation, namely, Immunogrit, for its potential of reversing or slowing the premature skin aging. Aging accelerates when skin encounter harmful solar radiation, air pollution. Lifestyle choices of smoking and alcoholism, diseases such as diabetes also induce skin aging. In addition, nutrition plays an important role too. Higher intake of carbohydrate diet has been earlier related to the development of pre-mature aging in the skin. In this line, many research studies, previously has shown D-galactose-induced accelerated aging in several in vitro and in vivo models that have been instrumental in studying aging phenomenon.

This study has developed an in vitro model in human skin keratinocytes, HaCaT cell lines by treating them with 100 mM of D-Galactose for 72 h. We observed that D-Galactose induced senescence in HaCaT cells by upregulating cell cycle checkpoints, p16, and p21 at transcriptional and translational levels. Quantitative RT-PCR and western blotting techniques were employed to determine the gene expression and protein levels, respectively. D-Galactose inhibited the cell division and enhanced the β-galactosidase

activity in HaCaT cells, hallmarks of cellular senescence, that contribute to aging. The human keratinocytes were co-treated with Immunogrit, to look for indications of any reversal of cellular changes that were induced by D-Galactose. The study determined that Immunogrit rescued the human keratinocytes from the oxidative and nitrosative stress induced by the virtue of D-Galactose. Notable, even the cellular senescence markers, namely p21, p16, and Lamin B1 (LMNB1) levels showed reversal with Immunogrit treatment in D-Galactose-induced keratinocytes. Matrix metalloproteinases, MMP1, and MMP9 function as collagenases and elastases, respectively. The upregulation of the matrix metalloproteinases degrades the extracellular matrix in the skin and contributes to the development of wrinkles, an indicator of premature skin aging. D-Galactose in human keratinocytes significantly increased the gene expression levels of MMP1 and MMP9. However, with Immunogrit treatment, these levels are reduced back to the normal. Hydroxyproline is an important component of collagen. D-Galactose induction in keratinocytes significantly reduced the Hydroxyproline levels. However, these levels remained unaffected in the cells that were co-treated with Immunogrit. Taken together, this research study determined that Immunogrit exhibits a strong potential to reverse or slow the process of premature aging by modulating the signature markers of aging.

Phytochemical study of Immunogrit was performed on Ultra Performance Liquid Chromatography equipped with Quadrupole Time of Flight Mass Spectrometry (UPLC/ QToF-MS). Study in both positive and negative mode confirm the presence of phytochemical in the Immunogrit as shown in Fig. 1.

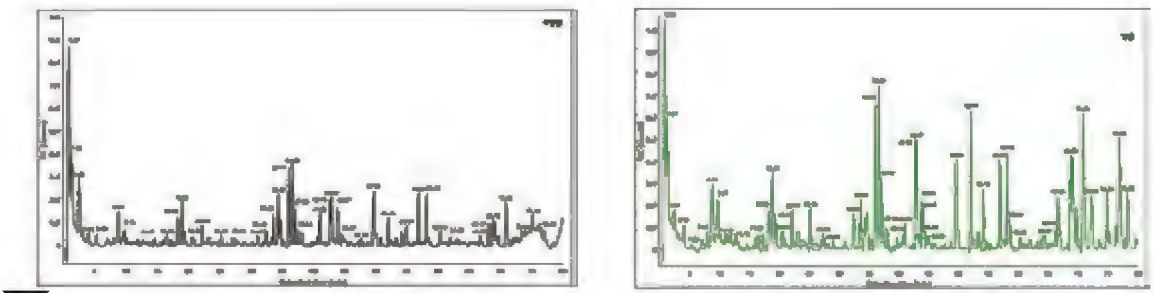


Fig. 1 Ultra Performance Liquid Chromatography Equipped with Quadrupole Time of Flight Mass Spectrometry (UPLC/ QToF-MS) study in both positive and negative mode confirm the presence of about 78 phytochemical in the Immunogrit tablet.

Dose and Method of Use of Immunogrit:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

IMMUNOGRIT CHURNA
इम्यूनोग्रिट चूर्ण

Introduction to Immunity and Auto-Immune Diseases:

The immune system is a collection of cells, tissues, and organs that work together to protect the body against pathogens including bacteria, viruses, and parasites. It is critical for overall health and the body's defence against infections and illnesses. The immune system also aids in the detection and clearance of abnormal cells, including malignant cells, so aiding the body's fight against cancer.

A host's defence mechanism is the immune system. It is made up of several biological components, ranging from single white blood cells to complete organs, as well as numerous intricate biological processes. The immune system's job is to defend the host against viruses and other disease-causing agents, such tumour cells. The immune system has to be able to recognise a range of infections in order to work effectively. Additionally, it must be able to differentiate healthy host cells from pathogen cells and between malignant or damaged host cells and healthy host cells. The immune system in humans and the majority of other animals is made up of tiered defences with higher specificity for different infections or tumour cells.

The innate immune system and the adaptive immune system are the two subsystems that are called the two categories of the human immune system's several layers of defence. The physical barriers that stop pathogens from entering the body, eliminate them once they do, or flush them out before they can establish themselves in the friendly environment of the body's soft tissues are the standard starting point for any discussion of the innate immune response. One of the body's most fundamental defence systems is the barrier defence. The barrier defences are always functioning to guard against a wide variety of diseases; they are not a reaction to illnesses. The phagocytes are the body's quick-response initial line of immunological defence against organisms that have gotten past the body's protective barriers and infiltrated its delicate tissues. For instance, a process known as phagocytosis occurs when certain leukocytes (white blood cells) consume and kill pathogens they come into contact with. Inflammation is the term used to describe the body's reaction to a pathogen invasion.

If infections are able to infiltrate the body while eluding the innate immune system's basic defences, the adaptive immune system is triggered. An adaptive response is peculiar to the sort of infection or malignant cells that has entered the body. A targeted attack takes longer to begin, but once it is, its focus makes it incredibly powerful. In most cases, an adaptive response results in immunity. This is a state of

resistance to a particular pathogen as a result of the adaptive immune system's capacity to "remember" the pathogen and instantly mount a potent response specific to that pathogen in the event of a future invasion.

The body's immune system protects it against illness and infection. However, when the immune system is damaged, it wrongly targets healthy cells, tissues, and organs for assault. These attacks, also known as autoimmune illness, can affect any region of the body, impairing basic function and potentially becoming lethal. One organ is affected by "organ-specific" autoimmune illnesses, but "non-organ-specific" autoimmune disorders can have an impact on many organs or bodily systems.

Depending on which physiological system is being attacked and to what extent, there are over 80 distinct autoimmune illnesses, ranging in severity from mild to incapacitating. Women are more vulnerable than males for unidentified reasons, especially when they reach reproductive age. Sex hormones are assumed to be at least partially to blame. Diagnosis of autoimmune disorders can be challenging due to the range of symptoms and comorbidity with other illnesses. Healthcare practitioners regularly do a complete medical history review, physical examination, and laboratory tests.

Ingredients and Medicinal Uses of Immunogrit Churna:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Fine Powder of:				
Vidarikand (Tuber)	*Pueraria tuberosa*	Poshak, Shoth Har	• Nourishing, • Anti-inflammatory	16.66 g
Meda (Rt. Bb.)	*Polygonatum verticillatum*	Dhatu Vardhak, Rakta Dosh Har	• Nourishes body tissues, • Cures diseases of the blood	8.33 g
Shatavari (Rd.)	*Asparagus racemosus*	Agni Vardhak, Rasayan, Balya	• Increases digestive power, • Rejuvenating, • Strengthening	8.33 g
Kakoli (Rt. Bb.)	*Roscoca procera*	Brimhan, Shosh Har	• Nourishing, • Cures progressive wasting	8.33 g
Kshirakakoli (Rt. Bb.)	*Lilium polyphyllum*	Dhatu Vardhak, Rakta Dosh Har	• Nourishes body tissues, • Cures diseases of the blood	8.33 g
Riddhi (Rt. Bb.)	*Habenaria intermedia*	Kshay Har, Brimhan	• Cures phthisis, • Nourishing	8.33 g
Varahikand (Tuberus Rt.)	*Dioscorea bulbifera*	Rakta Sangrahak, Dhatu Poshak	• Styptic • Nourishes body tissues	8.33 g

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each 100 g contains
Bala (Sd.)	*Sida cordifolia*	Poshak, Baya	• Nourishing • Strength-promoting	8.33 g
Safed musali (Rt.)	*Chlorophytum borivillanum*	Dhatu Vardhak, Balkarak	• Increases body tissues • Strengthening	8.33 g
Shuddh konch (Sd.)	*Mucuna pruriens*	Nadi Balya	• Gives strength to nervous system	8.33 g
Ashwagandha (Rt.)	*Withania somnifera*	Rasayan, Balkarak	• Rejuvenating • Strengthening	8.37 g

Immunogrit Churna is Useful in:

- **Weakness**
- **Immune Disorders**
- **Immunomodulatory**
- **Regulating Immune system**

Immunogrit Churna: Description in Classical Texts:

Immunogrit Churna was developed by using the reference of classical texts about herbs used for developing and increasing inherent immunity of human. Vidarikand is sweet in taste, mentoned under Guduchyadi varga in Bhava prakasha, this drug has the qualities of unctuousness and heaviness. It has cold potency, and used in nourishing and pacifies vata and pitta doshas, it has rejuvenating action.

Meda is placed under Hareetakyadi varga in Bhava prakasha. It is sweet in taste and has the qualities of heaviness and is cold in potency. It pacifies pitta and vata doshas and is nourishing in nature.

Shatavari is bitter and sweet in taste. It is heavy and unctuous in quality. Its vipaka is madhura and it is cold in potency. It pacifies

vata and pitta doshas. It is rejuvenating and promotes strength as well. Kakoli mentioned under Hareetakyadi varga in Bhava prakasha, is sweet in taste and is heavy in quality. It has cold potency.

Kshirakakoli is also mentioned Hareetakayadi varga in bhava prakasha. This drug is sweet in taste and has madhura vipaka. It has cold potency. This drug has vata pitta dosha pacifying effects and is nourishing in action. Riddhi is mentioned under Hareetakyadi varga of bhava prakasha. This plant is a component among the ashta varga plants that his known rejuvenating properties. It has sweet taste and heavy in quality. It pacifies all three doshas. It promotes strength of individual.

Varahikand has sweet and bitter tastes. It has katu vipaka. It is hot in potency. It has qualities of lightness and unctuousness. This drug is also rejuvenating and provides nourishment. Bala is included in Guduchyadi varga in Bhava prakasha. It has sweet taste and madhura vipaka. It is heavy and unctuous in nature. It pacifies vata dosha. It promotes strength.

Safed musali is sweet and bitter in taste. It is hot in potency. It is heavy in quality and has nourishing, bulk-promoting and rejuvenative effects. Shuddh konch is sweet and bitter in taste with madhura vipaka. It has heaviness and unctuousness as qualities. It has hot potency and balances all three doshas.

Bhavaprakasha has included Ashwagandha in Guduchyadi varga. This drug has astringent and bitter taste and madhura vipaka. It pacifies vata and kapha doshas. It gives strength and is rejuvenating also.

Scientific Evidence of Immunogrit Churna:

To evaluate the physico chemical composition of Immunogrit churna, Moisture content, pH (1 % w/v solution in water), total ash, acid insoluble ash, and water soluble extractive were evaluated and results are shown in table.1. For Phytochemical evaluation, Immunogrit churna was analyzed for:

- Total Phenolic content using gallic acid as a reference standard and using Folin–Ciocalteu method and Ultra Violet Visible spectrophotometer. Calibration curves were plotted from 5 ppm (part per million) to 30 ppm, the regression equation (R^2) and plot are shown in Fig. 1. Total polyphenols are found to be about 2.26 %w/w as shown in table 2.
- Total Flavonoids content using quercetin as a reference standard and using Aluminium chloride method and Ultra Violet Visible spectrophotometer. Calibration curves were plotted from 20 ppm (part per million) to 50 ppm, the regression equation (R^2) and plot are shown in Fig. 2. Total flavonoids are found to be about 0.01 %w/w as shown in table 2.
- Total Proanthocyanidins content using quercetin as a reference standard and using vanillin hydrochloride and Ultra Violet Visible spectrophotometer. Calibration curves were plotted from 75 ppm (part per million) to 400 ppm, the regression equation (R^2) and plot are shown in Fig. 3. Total Proanthocyanidins are found to be about 1.55 %w/w as shown in table 2.
- Total Tannin content was evaluated using potassium dichromate titrimetric method. Total Tannin content was found to be about 1.65 %w/w as shown in table 2.

Table: 1. Physico-Chemical Analysis of Immunogrit Churna.

S. N.	Parameters	Results (%w/w)
1.	Moisture content	9.50
2.	pH	6.68
3.	Total ash content	4.59
4.	Acid insoluble ash	1.43
5.	Water soluble extractive	4.50

%w/w : Percentage weight by weight

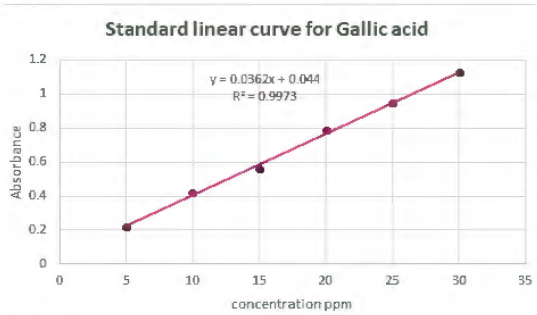


Fig. 1: Calibration curve for total phenolic content using gallic acid as reference standard.

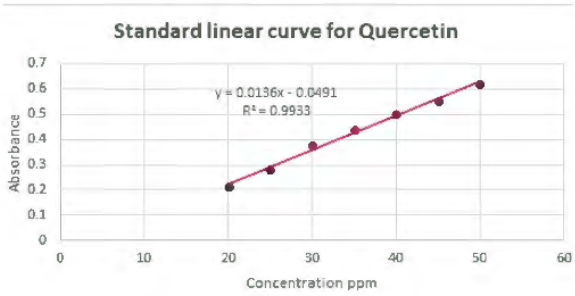


Fig. 2: Calibration curve for total flavonoid content using quercetin as reference standard.

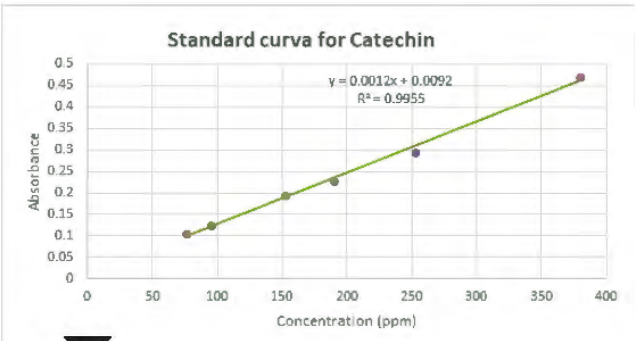


Fig. 3. Calibration curve for Proanthocyanidins using catechin as the reference standard.

Table: 2. Phytochemical Composition of Immunogrit Churna

S. N.	Parameters	Results (%w/w)
1.	Total phenolic content	2.26
2.	Flavonoid content	0.01
3.	Proanthocyanidine	1.55
4.	Tannins	1.65

%w/w : Percentage weight by weight

Dose and Method of Use of Immunogrit Churna:

Dose and Frequency	**3-5 gms, twice a day**
Adjuvant	**Milk**
Time of Administration	**Post meals**
Or as directed by the physician.	

Tablet

CURCUMIN Gold 95

करक्यूमिन गोल्ड

Introduction to Immunomodulators, Anti-inflammatory, Digestive Disorder, Joint Pain Management, Antiseptic and Blood Purifier:

Immunomodulators are a type of therapeutic agent that modifies the immune system's response in order to produce a therapeutic effect. These medicines, by either boosting or inhibiting the immune response, play an important role in the treatment of a variety of immunological-mediated illnesses and ailments. The immune system is a complicated network of cells, tissues, and chemicals that collaborate to protect the body against diseases, foreign substances, and abnormal cells. However, in some disorders, the immune system can become dysregulated, resulting in an overactive or underactive immunological response. Immunomodulators aid in the restoration of the immune system's balance and normal functioning, eventually promoting health and well-being.

Inflammation is the body's natural defensive response to harmful stimuli including infection, injury, or tissue damage. While acute inflammation is necessary for healing and defence, persistent inflammation may be harmful and lead to the development of a variety of disorders. Anti-inflammatory agents are compounds that aid in the modulation or reduction of inflammation in the body, hence giving therapeutic advantages. Anti-inflammatory drugs are commonly employed in the treatment of inflammatory illnesses such as arthritis, asthma, inflammatory bowel disease, and some skin problems. These medicines decrease inflammation and relieve symptoms by targeting several components and pathways involved in the inflammatory response.

Digestive diseases, often known as Gastro-Intestinal (GI) disorders, are a broad category of illnesses affecting the digestive system. The digestive system is essential for the digestion and absorption of nutrients from meals, as well as waste removal. When this system fails, it can cause a variety of digestive problems as well as damage general health and well-being. The symptoms of digestive diseases can vary greatly depending on the ailment and organ involved. Abdominal discomfort, bloating, gas, diarrhoea, constipation, nausea, vomiting, heartburn, and changes in appetite and weight are all common symptoms. Chronic or recurring symptoms of several digestive illnesses, such as Inflammatory Bowel Disease (IBD) and Gastro-Esophageal Reflux Disease (GERD), can have a major impact on quality of life.

Joint pain is a common problem that may affect people of all ages. Injury, inflammation, infection, autoimmune illnesses, and degenerative conditions such as osteoarthritis are all possible causes of it. Joint pain management involves a broad approach that includes both

non-pharmacological and pharmaceutical therapies. Non-pharmacological therapies emphasise lifestyle changes, physical therapy, and assistive gadgets, whereas pharmaceutical interventions try to decrease inflammation and discomfort. The combination of these techniques can help people manage joint pain, improve joint function, and improve their overall quality of life.

Antiseptics are essential for maintaining surfaces clean and avoiding the spread of illnesses. They are chemical agents used to limit the development and activity of microorganisms such as bacteria, viruses, and fungus in living tissues. Antiseptics are extensively used to enhance cleanliness and minimise the risk of infection in a variety of hospital settings, as well as in the home.

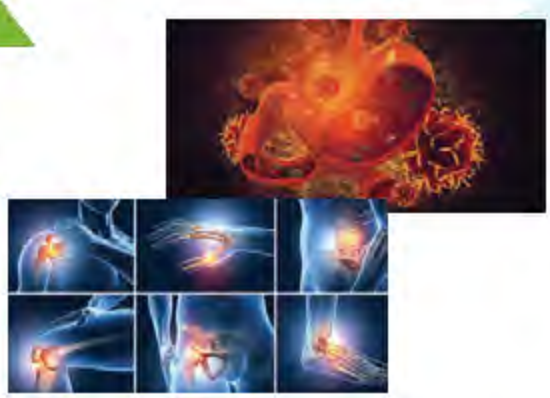
Blood purifiers are substances or medications that purify and detoxify the blood. Blood purification has been performed in traditional medical systems for ages, with the notion that impurities in the blood might cause a variety of health problems. Alternative and complementary medicine practitioners frequently utilise blood purifiers to support general health and well-being. Blood purification is based on the concept that toxins and impurities can build up in the blood, causing imbalances and illnesses. Blood purifiers are supposed to eliminate toxins from the body and restore the body's natural balance. While the notion of blood purification is devoid of scientific proof and is frequently dismissed as pseudoscience, some drugs and therapies are routinely referred to be blood purifiers in traditional and alternative medical practises.

Ingredients and Medicinal Uses of Curcumin Gold :

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Turmeric (Rz.)	*Curcuma longa*	Kas, Vish Dosh	• Allergic condition	320 mg
Ashwagandha (Rt.)	*Withania somnifera*	Manoglani Har, Shrama Har	• Stress-relieving • Alleviates fatigue	50 mg
Sudh Salai Guggul (Resin)	*Boswellia serrate*	Shoth Har	• Anti-inflammatory	130 mg

Curcumin Gold is Useful in:

- **Immunomodulator**
- **Anti- Inflammatory**
- **Digestive Disorder**
- **Joint Pain Management**
- **Antiseptic**
- **Blood Purifier**



Curcumin Gold: Description in Classical Texts:

Curcumin Gold is an Ayurvedic proprietary medicine that is produced using herbs that have effective immune modulator property. Bhava prakasha has mentioned Turmeric (Haridra) under Hareetakyadi Varga. It has pungent and bitter tastes. It pocess quality of dryness and is hot in potency. It pacifies kapha pitta doshas. It has anti-inflammatory action. It can cure blood related diseases. It has wound healing potential.

Salai Guggulu has bitter and pungent tastes. It is placed in Karpooradi varga by Bhava prakasha. It pocess the qualities of lightness, dryness and clarifying the channels in body. It is hot in potency and has katu vipaka. It balances all three doshas. It can help cure tumors and is helpful in thyroid disorders.

Bhavaprakasha has included Ashwagandha, under Guduchyadi varga, is vatakaphahara in action, having bitter and astringent tastes. It is hot in potency and promotes strength and is rejuvenating as well.

Scientific Evidence of Curcumin Gold:

Curcuminoids is one of the major constituents obtained from Curcuma longa. Curcuminoids are diaryl heptanoid derivatives existing as a mixture of curcumin, desmethoxycurcumin and bisdemethoxycurcumin. Phytochemical evaluation of Curcumin Gold Capsule by High Performance Liquid Chromatography (HPLC) confirms the presence of curcumin at 19.166 minutes, desmethoxycurcumin at 22.241 minutes and bisdesmethoxycurcumin at 25.673 minutes. The overlay chromatogram of the reference standard and Curcumin gold sample are shown in Fig. 1.

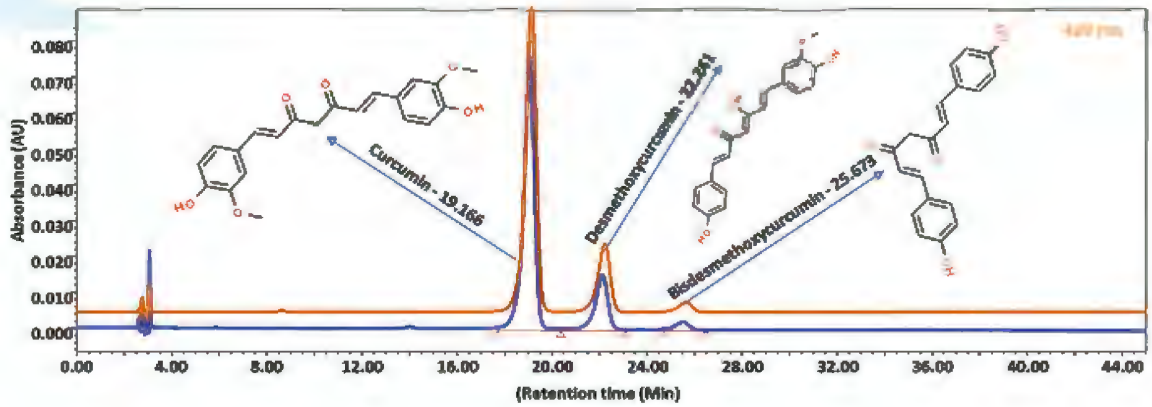


Fig 1: High Performance Liquid Chromatography (HPLC) at 420 nm of wavelength confirms the presence of curcuminoids (curcumin, desmethoxycurcumin and bisdesmethoxycurcumin).

Dose and Method of Use of Curcumin Gold:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Tablet

Weight Go वेटगो

Introduction to Obesity, and Excessive Fat Accumulation:

Obesity is associated with serious health risks and an increased death rate. Overweight and obesity are defined as "abnormal or excessive fat accumulation that presents a risk to health." It is suggested that individuals with obesity can be categorized based on their Body Mass Index (BMI). According to World Health Organization (WHO), Body Mass Index below 18.5 kg/m^2 is classified as underweight, 18.5-24.9 kg/m^2 is normal weight, 25.0-29.9 kg/m^2 is overweight, 30.0-34.9 kg/m^2 is obese indicating that the patient is at moderate risk, 35.0-39.9 kg/m^2 is obese II mentioning high risk and above 40.0 kg/m^2 is obese III which shows that the patient is at very high risk and requires surgery.

A combination of genetic predisposition increased accessibility to high-energy meals, and modern society's diminished necessity for physical activity has led to an epidemic of obesity around the globe. Obese women appear to be at greater risk of psychological dysfunction than obese men. Globally, 1 billion people have been diagnosed with obesity, 650 million adults, 340 million adolescents and 39 million children. As per the estimates of World Health Organization (WHO), nearly 167 million people will become overweight or obese by 2025. The underlying pathophysiology of obesity includes either up-regulate hunger or down-regulate calorie usage controlling cellular processes, physical activity, and other factors.

A vascular problem will develop as a result of this dysregulation, which causes an overabundance of adipocytes to grow and boost cytokine release. These side effects are linked to atherosclerosis, hyperlipidemia, and cardiovascular problems. Serious pathological illnesses such as bowel cancer, gallstone disease, liver disease, and other gut disorders are brought on by obesity in conjunction with atherosclerosis. Either decreasing appetite or boosting calorie expenditure can be used to treat obesity.

Regulation of the hormones and receptors that express hunger and satiety signals can influence appetite. Additionally, an increase in physical activity prevents the formation of white adipocytes. These procedures will aid in preventing obesity and reducing its negative effects. Accumulation of adipocytes all over the body is brought on by an excess of fatty acids and triglycerides in the circulation. Increased oxidative stress, hypertriglyceridemia,

lipotoxicity, hyperglycemia, and several metabolic disorders are caused by the accumulated adipocytes. Therefore, lowering amounts of stored and circulating fat is crucial for managing obesity.

Any sequence in this physiological framework that is dysregulated causes imbalance and culminates in obesity. Adipose tissue, the pancreas, and the gastrointestinal system are all controlled by dopamine to secrete their respective hormones. These hormones regulate body fat, satiety, and hunger, whereas their misregulation may cause obesity. The signs and symptoms of obesity include hyperphagia along with obstructive sleep apnea or obesity hyperventilation syndrome and impaired exercise tolerance. The medicines commonly prescribed for obesity are orlistat, lorcaserin, liraglutide, phentermine, semaglutide, bremelanotide.

Ingredients and Medicinal Uses of Weightgo:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each tablet contains
Dry Extract of:				
Ashwagandha (New Lf., Jwara)	***Withania somnifera***	Vata Kapha Hara, Balya	• Pacify vata kapha doshas • strengthening	150 mg
Amla (Fr.)	***Phyllanthus emblica***	Rasayana, Sarvadoshahara	• Rejuvenating • Pacify all doshas	50 mg
Gokhru (Wl. Pl.)	***Tribulus terrestris***	Mutrala, Agnikrit	• Diuretic • Improve digestion	50 mg
Baheda (Fr. Rd.)	***Terminalia bellirica***	Bhedana, Pittakaphahara	• Laxative • Pacify pitta and kapha dosha	50 mg
Giloy (St.)	***Tinospora cordifolia***	Tridosha Hara, Deepani,	• Pacify all doshas • Improve digestion	50 mg
Lauki (Wl. Pl.)	***Lagenaria vulgaris***	Pittahara	• pacifies pitta dosha	100 mg
Harad (Fr. Rd.)	***Terminalia chebula***	Lekhaneeya, Shothhar	• Scraping action on accumulated doshas • Anti-inflammatory	50 mg
Grape (Sd.)	***Vitis vinifera***	Vata Hara, Snigdha	• Pacify vata • Unctuous	50 mg
Kokam (Fr.)	***Garcinia indica***	Deepana, Sangrahi	• Improve digestion • Absorbent	50 mg

Weightgo is Useful in:

- **Obesity**
- **Overtly Fat Accumulation**
- **Induce Weight Loss**

Weightgo: Description in Classical Texts:

Weightgo is an Ayurvedic proprietary medicine prepared by using various time-tested Ayurvedic herbs like Ashwagandha tender leaf (Jwara) which comes under Guduchyadi varga in Bhavprakash nighantu. It is Astringent and Bitter in taste. Physical property is lightness, and hot in potency. It pacifies vata, kapha doshas and is useful in edema, and phthisis.

Amla comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, sour, astringent in taste and cold potency. It has heavy property and sweet vipaka. This drug pacifies vata, pitta & kapha doshas. It is good for management of malabsorption, abdominal diseases, vomiting, and diseases of liver & spleen. Gokhru comes under Guduchyadi varga in bhavprakash nighantu. It is sweet in taste and has cold potency with lightness and dryness properties. It pacifies vata. Acts as a tonic, appetizer and aphrodisiac.

Baheda comes under Haritakyadi varga in bhavprakash nighantu. It is astringent in taste, and hot potency with lightness and dryness properties, and sweet vipaka. It pacifies pitta & kapha doshas. Giloy comes under Guduchyadi varga in bhavprakash nighantu. It is pungent, bitter and astringent in taste. Physical property is lightness. It's vipaka is sweet and potency is hot. It pacifies vata, pitta, and kapha doshas. It can cure various conditions like indigestion and vomiting.

Lauki comes under Shaka varga in bhavprakash nighantu. It is bitter in taste with lightness and sharpness properties along with cold potency and katu vipaka. It pacifies pitta dosha. Harad comes under Haritakyadi varga in bhavprakash nighantu. It is sweet, sour, pungent, bitter, astringent in taste, and hot potency with lightness and dryness properties. It has madhura vipaka. This drug is rejuvenating and strength-promoting.

Grape comes under Amraadiphala varga in bhavprakash nighantu, which is sweet and astringent in taste. Physical property is heaviness. This drug has madhura vipaka. It pacifies vata dosha and aggravates kapha

dosha. Acts as a laxative, nutritive, diuretic, aphrodisiac, and appetizer. Kokam comes under Amraadiphala varga in bhavprakash nighantu. It is sour in taste. Physical property is lightness. This drug is hot in potency and pacifies vata dosha, while aggravating pitta, and kapha doshas.

Scientific Evidence of Weightgo:

Patanjali Research Foundation has done detailed animal experiments to evaluate the effectiveness of Weightgo. It has been evaluated for its in-vivo anti-obesity activity in a mouse model of High-Fat Diet (HFD)-induced obesity. The schematic representation of the in-vivo experiments is shown in fig. 1. In this model, the activity of Weightgo was investigated alone and also in combination with a moderate aerobic exercise regimen hypothesizing its additive or synergistic action with exercise in alleviating obesity-associated metabolic abnormalities. To induce obesity, C57BL/6 mice were offered of High-Fat Diet providing 60% of daily caloric intake as fat, for 8 consecutive weeks. The successful execution of of High-Fat Diet-induced obesity after 8 weeks was confirmed by a significant increase in body weight gain in all the animals. Subsequently, the treatment of animals with the oral administration of Weightgo alone and in combination with a moderate aerobic exercise was initiated along with the consumption of High-Fat Diet for 14 consecutive weeks. The chronic consumption of High-Fat Diet in animals induced human-like obesity-related metabolic and histological abnormalities, which were clearly evident as increased body weight gain, feed efficiency ratio, glucose intolerance, reduced insulin sensitivity, dyslipidemia, hepatic triglycerides accumulation, impaired hepatic function markers, hepatic steatosis and adiposopathy in obese mice. The oral administration of Weightgo alleviated the of High-Fat Diet-induced alterations in treated mice, both alone and in the combination approach with moderate aerobic exercise, better than the exercise treatment alone. Thus, these findings are indicative of the protective potential of Weightgo against obesity-related abnormalities and suggest that it could be utilized as an adjunct to lifestyle interventions to combat obesity and its associated complications.

The Phytochemical analysis of Weightgo was conducted using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array Detector (PDA) as shown in Fig. 2. PDA detector has been used to scan the compound from 200 nm wavelength to 800 nm wavelength, and confirms the presence of compound. UHPLC profile recorded at 270 nm wavelength confirms the presence of gallic acid 12.29 minutes, methyl gallate 23.91 minutes, corilagin 35.29 minutes, ellagic acid 44.07 minutes and penta galloyl glucose 45.57 minutes. Similarly, at 227 nm wavelength confirms for the presence of withaferin A at 60.61 minutes and at 210 nm wavelength hydroxycitric acid at 4.66 minutes.

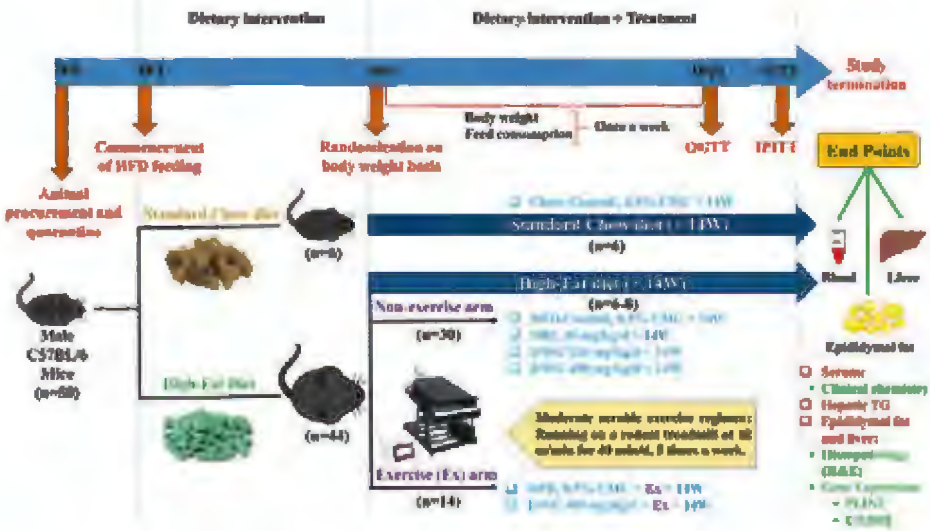


Fig. 1. Schematic of the in-vivo experiments. After the completion of the quarantine period, mice were randomized on the basis of their respective body weights and allocated to Chow-Control and High- fat diet (HFD) groups. Animals assigned to the Chow-Control group (n = 6) were provided a standard diet and animals allocated to the high-fat diet group (n = 44) were maintained on HFD for 8-consecutive weeks. The HFD imparted 60% of daily calorie consumption as fat. Subsequent to the successful development of obesity, the HFD-provisioned animals were once again randomized based on their body weights and were then assigned to different study groups. These animals continued to receive HFD for an additional 14 weeks. The study groups were further categorized into two arms, namely the non-exercise and exercise arms. Mice allocated to the non-exercise arm were orally administered Orlistat (ORL) at the dose of 30 mg/kg/day, once daily, as well as Divya Weightgo (DWG) at the doses of 120 and 400 mg/kg/day, twice daily for 14-consecutive weeks. Mice allocated to the Chow-Control and HFD-Control group received 0.5% carboxymethylcellulose (CMC), twice daily by gavage. Further, the animals allotted to the exercise arm of the study comprised of two groups, namely HFD + Exercise (Ex) and DWG 400 + Ex. Initially, the mice assigned to the exercise arm underwent training to run on a rodent treadmill. During the training period the animals ran at the speed of 10 m/min for 10 min/day, which was subsequently increased steadily to 12 m/min for 40 min/day over a period of two weeks. After the acquisition of training, mice were subjected to this moderate aerobic exercise regimen for 12- consecutive weeks during which the animals underwent running sessions for 5 days a week. Additionally, along with the exercise, mice assigned to the HFD + Ex group were administered 0.5% CMC, twice daily by gavage and those allocated to the DWG 400 + Ex group received DWG at the dose of 400 mg/kg/day, twice daily by oral route. The body weight and feed consumption of all the animals included in the study was documented weekly. After 12-consecutive weeks of treatment, Oral glucose tolerance test (OGTT) and Intraperitoneal Insulin tolerance test (IPITT) were performed at a time interval of 4 days respectively. After the completion of a total of 14 weeks of treatment, the animals were subjected to fasting for 6 hours and were humanely sacrificed under overdose of thiopentone anaesthesia. Before the animal died, blood was withdrawn and the serum was separated for the estimation of clinical chemistry parameters. Subsequently, the epididymal fat tissues were excised and were subjected to processing for histopathological and gene expression analysis. Additionally, the liver was also harvested for the estimation of hepatic triglycerides as well histopathological evaluation.

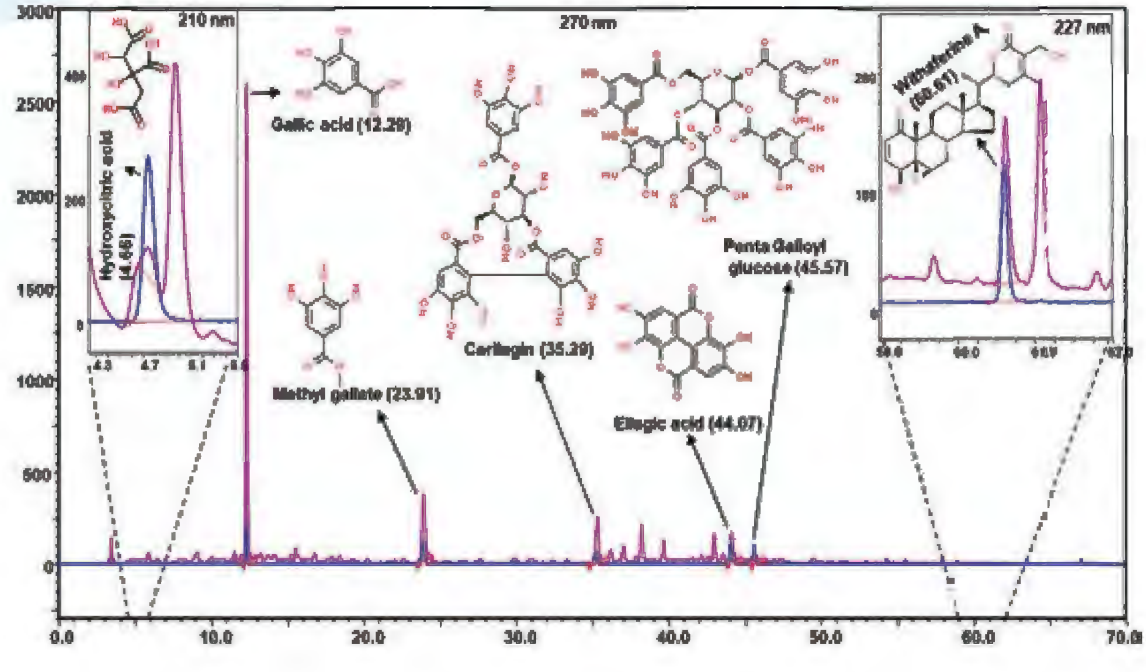


Fig. 2. Phytochemical analysis of Weightgo was performed using Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array Detector (PDA). UHPLC profile recorded at 270 nm wavelength confirms the presence of gallic acid, methyl gallate, corilagin, ellagic acid and penta galloyl glucose. Similarly, at 227 nm wavelength confirms for the presence of withaferin A at 60.61 minutes and at 210 nm wavelength hydroxycitric acid at 4.66 minutes.

Dose and Method of Use of Weightgo:

Dose and Frequency	2 Tablets, twice a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code
https://www.sciencedirect.com/science/article/pii/S0753332223005747?via%3Dihub

Capsule

IRON COMPLEX NATURAL
आयरन कॉम्प्लेक्स

Introduction to Anemia:

Iron is an essential micronutrient, as it is required for adequate erythropoietic function, oxidative metabolism and cellular immune responses. Although the absorption of dietary iron (1-2 mg/d) is regulated tightly, it is just balanced with losses. Therefore, internal turnover of iron is essential to meet the requirements for erythropoiesis (20-30 mg/d). Increased iron requirements, limited external supply, and increased blood loss may lead to Iron Deficiency (ID) and iron-deficiency anemia. Hepcidin, which is made primarily in hepatocytes in response to liver iron levels, inflammation, hypoxia and anemia, is the main iron regulatory hormone. Once secreted into the circulation, hepcidin binds ferroportin on enterocytes and macrophages, which triggers its internalization and lysosomal degradation. Thus, in chronic inflammation, the excess of hepcidin decreases iron absorption and prevents iron recycling, which results in hypoferremia and iron-restricted erythropoiesis, despite normal iron stores (functional ID), and Anemia of Chronic Disease (ACD), which can evolve to ACD plus true ID (ACD + ID). In contrast, low hepcidin expression may lead to iron overload, and vice versa. Laboratory tests provide evidence of iron depletion in the body, or reflect iron-deficient red cell production. The appropriate combination of these laboratory tests help to establish a correct diagnosis of ID status and anemia.

During early infancy, iron requirements are met by the little iron contained in the human milk. The need for iron rises markedly 4-6 months after birth and amounts to about 0.7-0.9 mg/day during the remaining part of the first year. Between 1 and 6 years of age, the body iron content is again doubled. Iron requirements are also very high in adolescents, particularly during the period of growth spurt. Girls usually have their growth spurt before menarche, but growth is not finished at that time. In boys there is a marked increase in hemoglobin mass and concentration during puberty. In this stage, iron requirements increase to a level above the average iron requirements in menstruating women.

The average adult stores about 1-3 g of iron in his or her body. A fine balance between dietary uptake and loss maintains this balance. About 1 mg of iron is lost each day through sloughing of cells from skin and mucosal surfaces, including the lining of the gastrointestinal tract. Menstruation increases the average daily iron loss to about 2 mg per day in premenopausal female adults. The augmentation of body mass during neonatal and childhood growth spurts transiently boosts iron requirements.

A dietary intake of iron is needed to replace iron lost in the stools and urine as well as through the skin. These basal losses represent approximately 0.9 mg of iron for an adult male and 0.8 mg for an adult female. The iron lost in menstrual blood must be taken into consideration for women of reproductive age.

Iron deficiency anemia affects >1.2 billions individuals worldwide, and iron deficiency in the absence of anemia is even more frequent.

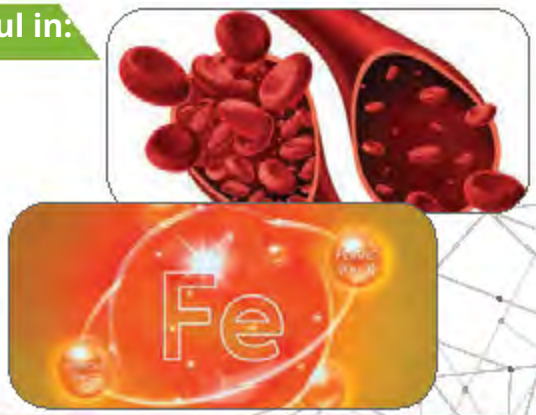
According to the Global Burden of Disease Study 2016, iron deficiency anemia is 1 of the 5 leading causes of years lived with disability burden and is the first cause in women. Adopting the World Health Organization–recommended cutoff for anemia (Hb <13 g/dL in males, <12 g/dL in females, <11g/dL during pregnancy), a worldwide survey showed that in 2010, anemia still affected one third of the population, with approximately half of the cases resulting from iron deficiency. The estimate is that ~1.24 billion individuals experience iron deficiency anemia, although with huge variations from low- to high-income countries. The global prevalence of iron deficiency without anemia remains elusive, although the suggested figure is at least double that of iron deficiency anemia.

Ingredient, Composition and Medicinal Uses of Nutrela Iron Complex Natural:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Fine Powder of:				
Mandoor bhasma	Classical Preparation	Balya, Pandu Har, Dhatu Poshak	• Strengthening • Anti-anemic • Nourishing	125 mg
Dry Extract of:				
Spinach (Lf.)	*Spinacia oleracea*	Rochan, Poshak, Dah Shamak, Shothaghna	• Nourishing • Alleviates burning sensation • Anti-inflammatory	115 mg
Rosehip (Fr.)	*Rosa indica*	Pachak, Paushtik, Tridoshaghna	• Improves digestion • Nourishing • Pacifies all three doshas	110 mg

Nutrela Iron Complex Natural Useful in:

- **Anaemia**
- **Weakness**
- **Iron Supplement**



Nutrela Iron Complex Natural: Description in Classical Texts:

Nutrela iron complex natural is a herbo-mineral formulationn useful in maintaining normal iron levels in body.

Mandoor bhasma is prepared by incineration of rust of iron (iron oxide). This is useful in anemia, jaundice and inflammation. Spinach is slightly pungent and sweet taste, with qualities of heaviness and dryness; cold potency and it increases vata kapha doshas. Rosehip is pungent, bitter, astringent and sweet in taste with qualities of lightness and unctuousness; cold potency and madhura vipaka. It pacifies all three doshas.

Scientific Evidence of Nutrela Iron Complex Natural:

Iron was one of the major constituents present in the Nutrela iron complex natural. Inductive Coupled Plasme with Mass Spectrometry (ICP-MS) study confirms the presence of iron. Other phytochemicals were characterized with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA). In the analysis of Nutrela iron complex natural at 270 nm wavelength, the different compounds were obtained mainly gallic acid at 10.89 minutes, methyl gallate at 26.34 minutes, corilagin at 38.32 minutes, and ellagic acid at 50.90 minutes, as shown in Fig. 1. In the chromatograms, the blue line shows the standard and pink line shows the test sample.

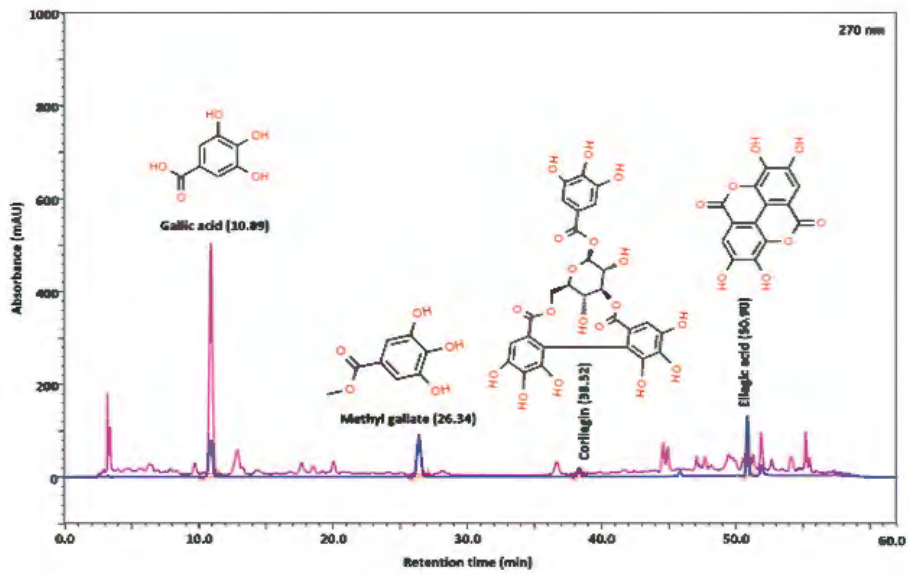


Fig. 1. Analysis of the Nutrela iron complex natural by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. In the Nutrela iron complex natural, the different compounds were observed mainly gallic acid (10.89 minutes), methyl gallate (26.34 minutes), corilagin (38.32 minutes), and ellagic acid (50.90 minutes) at 270 nm wavelength. In the chromatograms, the blue line represents the standards and pink line indicates the test sample.

Identification and quantification of iron were conducted using Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Kinetic Energy Discrimination (KED) collision mode confirms the presence of Iron (Fe) as shown in Fig. 2.

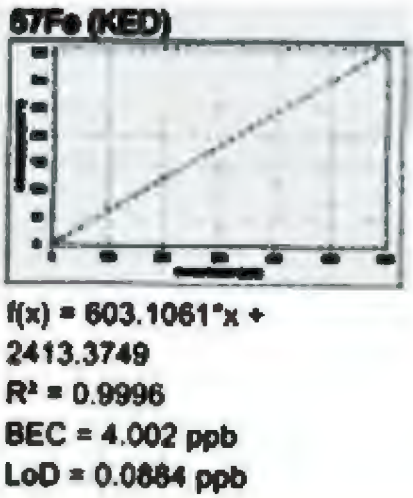


Fig. 2: Inductively Coupled Plasma Mass Spectrometry (ICP-MS) analysis calibration curve at different concentrations of Iron (Fe). R^2 value greater than 0.99 confirms the linear regression and the presence of Iron.

Dose and Method of Use of Nutrela Iron Complex Natural:

Dose and Frequency	1 Capsule in a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Capsule

VITAMIN B12
BIO-FERMENTED

विटामिन बी-12
बायो-फर्मेंटेड

Introduction to Vitamin B12 Deficiency:

Vitamin B12 is a water-soluble vitamin that is naturally present in some foods, added to others, and available as a dietary supplement and a prescription medication. Because vitamin B12 contains the mineral cobalt, compounds with vitamin B12 activity are collectively called "cobalamins" Vitamin B12 is required for the development, myelination, and function of the central nervous system, healthy red blood cell formation, and DNA synthesis. Vitamin B12 functions as a cofactor for two enzymes, methionine synthase and L-methyl malonyl-CoA mutase. Methionine is required for the formation of S-adenosylmethionine, a universal methyl donor for almost 100 different substrates, including DNA, RNA, proteins, and lipids.

Vitamin B12 is bound to protein in food and must be released before it is absorbed. The process starts in the mouth when food is mixed with saliva. The freed vitamin B12 then binds with haptocorrin, a cobalamin-binding protein in the saliva. More vitamin B12 is released from its food matrix by the activity of hydrochloric acid and gastric protease in the stomach, where it then binds to haptocorrin. If vitamin B12 is added to fortified foods and dietary supplements, it is already in free form and therefore does not require the separation step. Causes of vitamin B12 deficiency include difficulty absorbing vitamin B12 from food, lack of intrinsic factor, surgery in the gastrointestinal tract, prolonged use of certain medications, and dietary deficiency. Because people who have difficulty absorbing vitamin B12 from food absorb free vitamin B12 normally, their vitamin B12 deficiency tends to be less severe than that of individuals with pernicious anemia, who cannot absorb either food-bound or free vitamin B12. Certain congenital conditions, such as hereditary intrinsic factor defects and congenital vitamin B12 malabsorption, can also cause severe vitamin B12 deficiency.

The effects of vitamin B12 deficiency can include the hallmark megaloblastic anemia, as well as low counts of white and red blood cells, platelets, or a combination. Other symptoms may include glossitis of the tongue, fatigue, palpitations, pale skin, dementia, weight loss, and infertility. Neurological changes such as numbness and tingling in the hands and feet can also occur even without anemia. In addition, some studies have found associations between vitamin B12 deficiency or low vitamin

B12 intakes and depression.

In pregnant and breastfeeding women, vitamin B12 deficiency might cause neural tube defects, developmental delays, failure to thrive, and anemia in offspring. Since the body stores about 1 to 5 mg of vitamin B12 (or about 1,000 to 2,000 times as much as the amount typically consumed in a day), the symptoms of vitamin B12 deficiency can take several years to appear.

Ingredients and Medicinal Uses of Nutrela Vitamin B12 Natural:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Dry Extract of:				
Corn (Fr.)	*Zey mays*	Balya	• Strengthening	200 mg
Moringa (Lf.)	*Moringa oleifera*	Vatakaphahara, Vishanashana	• Pacifies vata and kapha doshas • Anti-toxic	75 mg
Aloevera (Lf.)	*Aloe barbadensis*	Balya, Rasayana	• Strengthening • Rejuvenating	75 mg

Nutrela Vitamin B12 Natural is Useful in:

- **Vitamin B12 Deficiency**
- **Increase General Vitality**
- **Nerve Strengthening**

Nutrela Vitamin B12 Natural: Description in Classical Texts:

Nutrela Vitamin B12 Natural is an Ayurvedic proprietary medicine having corn extract containing high source of vitamin B12. Corn is considered as pacifying pitta dosha and said to have a calming effect as well. Moringa is bitter and alkaline tastes with qualities of lightness, dryness and sharpness; hot potency and katuvipaka. It pacifies kapha and vata doshas and anti-toxic. Aloe vera is bitter and sweet in taste with qualities of heaviness, unctuousness and sliminess; cold potency and katuvipaka. It pacifies all three doshas. It is strengthening and rejuvenating.

Scientific Evidence of Nutrela Vitamin B12 Natural:

Nutrela Vitamin B12 Natural was analysed with the help of Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector. During the analysis of Nutrela Vitamin B12 Natural, the vitamin B12 (27.701 minutes) was observed as the main compound at 365 nm wavelength. In the chromatograms, the blue line shows the standard and pink line indicates the test sample, as shown in Fig. 1.

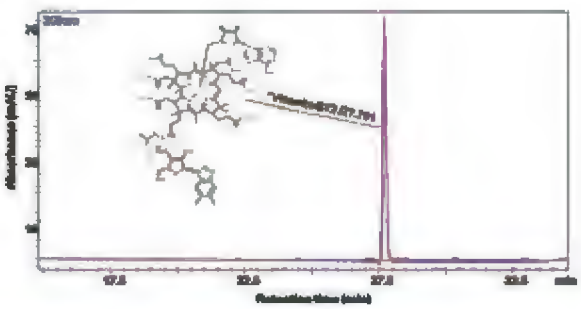


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Nutrela Vitamin B12 Natural. In Nutrela Vitamin B12 Natural analysis, at 365 nm wavelength, vitamin B12 (27.701 minutes) was observed as the main compound. In the chromatograms, the blue line shows the standard and pink line indicates the test sample.

Dose and Method of Use of Nutrela Vitamin B12 Natural:

Dose and Frequency	1 capsule a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

Capsule

BONE HEALTH NATURAL
बोन हेल्थ नेचुरल

Introduction to Bone Health:

Calcium is an essential element that plays numerous biological functions in the human body, of which one of the most important is skeleton mineralization. Bone is a mineralized connective tissue in which calcium represents the major component, conferring bone strength and structure. Proper dietary calcium intake is important for bone development and metabolism, and its requirement can vary throughout life. The mineral composition of drinking water is becoming relevant in the modulation of calcium homeostasis. In fact, calcium present in mineral drinking waters is an important quantitative source of calcium intake. This, together with its excellent bioavailability, contributes to the maintenance of the bone health.

Calcium is one of the most abundant elements in the human body and is a major component of the mineralized tissues where more than 99% of total body calcium is contained. It plays a key role in skeleton mineralization and is required for normal growth, development, and bone strength. Moreover, it has a role in a wide range of biological functions, such as muscle contraction and nerve impulse transmission. Since calcium is fundamental for many essential functions, it is important that its concentration in body fluids is maintained within a physiological range, thanks to the fine regulation by calcitropic hormones. Calcium is an essential element and is, therefore, essential to introduce the recommended quantity through the diet.

Bone is a complex cellular tissue that contains, by weight, approximately 70% mineral and 30% organic constituents. The mineral phase consists of about 95% calcium hydroxyapatite, $Ca_{10}(PO_4)_6(OH)_2$, a highly organized crystal of calcium and phosphorous, and other ions (such as sodium, magnesium, fluoride, and strontium). The organic phase (osteoid) is composed of 98% collagen fibers, and by a ground substance formed by glycoproteins and proteoglycans.

Dietary calcium deficiency is considered to be widespread globally, with published estimates suggesting that approximately half of the world's population has inadequate access to dietary calcium. Calcium is essential for bone health, but inadequate intakes have also been linked to other health outcomes, including pregnancy complications, cancers, and cardiovascular

disease. Populations in low and middle income countries (LMICs) are at greatest risk of low calcium intakes, although many individuals in high income countries (HICs) also do not meet recommendations. Paradoxically, many LMICs with lower calcium intakes show lower rates of osteoporotic fracture as compared with HICs, though data are sparse.

Since the most recent systematic review of calcium-related health outcomes, published in 2009, was based mainly on bone health, new evidence on the effect of adequate calcium intake on other health outcomes has been published. One of the most well-documented benefits of calcium supplementation beyond bone health is a significant reduction in the risk of preeclampsia and maternal morbidity in pregnant women and preterm birth.

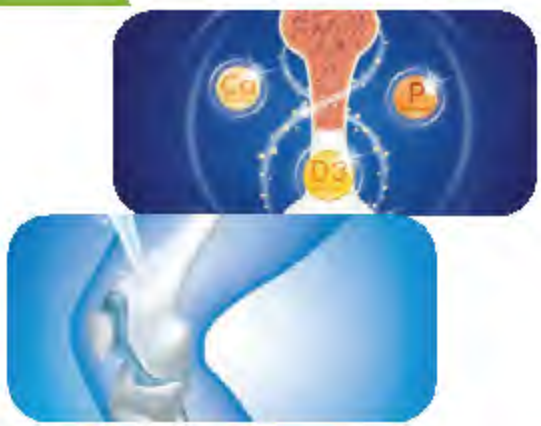
In nonpregnant adults, calcium supplementation may have a small effect in reducing blood pressure, especially in young adults, but the broader public health impact on the prevalence of hypertension is unclear. Calcium supplementation has also been associated with favorable changes in cholesterol metabolism, including a reduction in low-density lipoprotein and increase in high-density lipoprotein. Although less studied, unabsorbed calcium in the intestinal lumen may bind and impair absorption of oxalates, thereby reducing the risk of renal stones, and bind to triglycerides and bile acids, which may reduce low density lipoprotein cholesterol concentrations. The same mechanisms have been postulated to reduce the risk of recurrent colorectal adenomas by reducing bile induced mucosal damage.

Ingredients and Medicinal Uses of Nutrela Bone Health Natural:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each capsule contains
Fine Powder of:				
Moti Pishti	Classical Preparation	Poshak, Sandhaniya	• Nourishing • Alleviates fractures	120 mg
Mukta Shukti Pishti	Classical Preparation	Sandhan Karak, Balya, Pushtikarak	• Promote bone union • Strengthening • Nourishing	375 mg
Dry Extract of:				
Saileya (Lichen) (Wl. Pl.)	*Parmelia perlata*	Vishaghna, Shothaghna, Raktvikar Har, Hridya, Dah Shamak	• Anti-toxin • Anti-inflammatory • Alleviates blood disorders • Cardiotonic • Alleviates burning sensation	5 mg

Nutrela Bone Health Natural is Useful in:

- **Calcium Supplement**
- **Bone Health**
- **Fracture Healing**
- **Bone Strengthening**



Nutrela Bone Health Natural: Description in Classical Texts:

Nutrela bone health natural is made with three Ayurvedic ingredients that are effective in maintaining bone health. Mukta shukti pishti is used for various conditions from indigestion to cancer. It has sweet and pungent tastes and is useful in gastritis and other conditions like gastritis. Moti Pishti is helpful in pittaj vicar and reduces burning sensation. It can be given with honey, butter milk. Saileya has bitter and astringent in taste, with qualities of lightness and slimyness; cold potency and katu vipaka. It pacifies kapha and pitta doshas.

Scientific Evidence of Nutrela Bone Health Natural:

To evaluate the composition of Nutrela Bone Health Natural, Inductively Coupled Plasma Mass Spectrometry (ICP-MS) was used. Study confirms that calcium is the major component present in the product. Further High Performance Liquid Chromatography (HPLC) analysis at 263 nm of wavelength was used to evaluate cholecalciferol (Vitamin D3). Fig. 1 shows the comparative chromatogram of Nutrela Bone Health Natural (orange) and reference standard (blue) of cholecalciferol. Compound eluting at 11.62 minutes in products matches with that of a reference standard, confirming that vitamin D3 is also present in the tablet along with the calcium.

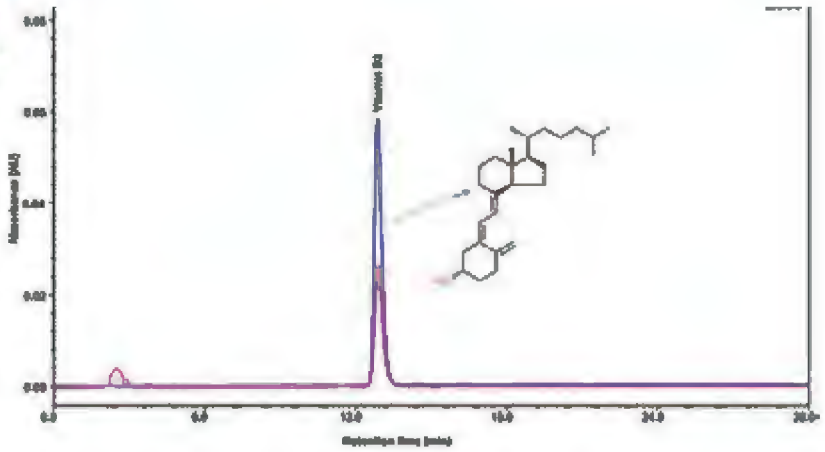


Fig. 1: High Performance Liquid Chromatography (HPLC) confirm the presence of Cholecalciferol (Vitamin D3) in Nutrela Bone Health Natural.

Inductively Coupled Plasma Mass Spectrometry (ICP-MS) with Kinetic Energy Discrimination (KED) collision mode confirms the presence of Calcium (Ca) as shown in Fig. 2.

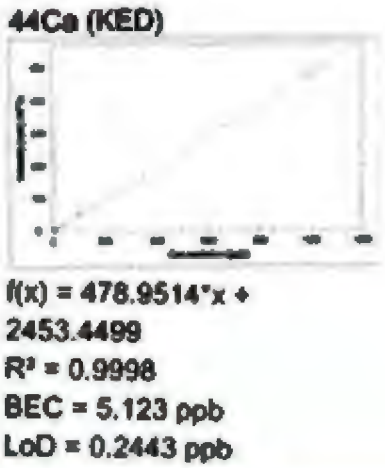


Fig. 2: Inductively Coupled Plasma Mass Spectrometry (ICP-MS) analysis calibration curve at different concentrations of Calcium (Ca). R^2 value greater than 0.99 confirms the linear regression and presence of Iron.

Dose and Method of Use of Nutrela Bone Health Natural:

Dose and Frequency	1 capsule a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

For further Information /Reading Scan the QR Code

Chewable tablets

VITAMIN D-2K

विटामिन डी-2 के

Introduction to Vitamin D Deficiency:

A fat-soluble vitamin called vitamin D (also known as ergocalciferol-D2, cholecalciferol-D3, and alfacalcidol) aids in the body's absorption of calcium and phosphorus. For the purpose of creating and maintaining healthy bones, the proper amounts of calcium, phosphorus, and vitamin D must be consumed. Rickets and osteomalacia are two bone diseases that are treated and prevented by vitamin D. The body produces vitamin D when skin is exposed to sunshine. You could not receive enough vitamin D from the sun if you use sunscreen, wear protective gear, spend little time in the sun, have dark skin, or are older. Osteoporosis is treated or prevented by vitamin D and calcium. Along with other drugs, vitamin D is also used to treat conditions including familial hypophosphatemia and hypoparathyroidism that result in low calcium or phosphate levels. It can be used to maintain normal calcium levels and support healthy bone formation in patients with renal disease. Infants who are breastfed typically receive vitamin D drops or other supplements since vitamin D levels in breast milk are typically low.

Both vitamin D2 and vitamin D3 are readily absorbed in the stomach and have a similar chemical makeup. Their sources are where they most drastically diverge: Shiitake, Portobello, and crimini mushrooms are just a few examples of the mushrooms that naturally contain vitamin D2. When these mushrooms are exposed to UV rays, the vitamin D concentration rises.

Animals and products derived from animals, such as milk, naturally contain vitamin D3. Additionally, when skin is exposed to ultraviolet B (UVB) radiation, it is directly synthesised in the skin.

Apart from the fact that, unless you are a vegetarian or vegan, vitamin D3 is probably simpler to incorporate into your daily diet, vitamin D3 has shown to be superior to vitamin D2 in two critical ways: Better bioavailability of vitamin D3 means that more of it may be absorbed by the body and utilised by cells. Because vitamin D3 has a longer half-life, it remains in the bloodstream for longer. According to some research, vitamin D3 increases blood levels of vitamin D 87% more than vitamin D2 does.

On the other side, historically, lanolin from sheep's wool has been used to create vitamin D3 in supplements. Because of this, it is inappropriate for people who wish to avoid items made from animals.

Vitamin D3, in addition to being used to treat vitamin D deficiency, may also have health advantages for certain individuals who do not suffer from one, particularly those who have high blood pressure or osteoporosis.

Unlike vitamin D2, vitamin D3 may be obtained from the sun, making it special.

An organic substance in the skin called 7-dehydrocholesterol will become active and begin producing vitamin D3 when exposed to UVB rays. Age and skin tone can affect the rate of production, with older persons and those with darker skin reaping the least rewards.
Sunscreen can reduce output by obstructing both UV rays. Even while getting a little sun each day might help you maintain your vitamin D levels, it's not the most dependable or safest method due to the possibility of developing skin cancer.

When the amount of vitamin D in the diet is insufficient, cholecalciferol (vitamin D3) is taken as a dietary supplement. Older individuals, breastfed babies, persons with dark skin, obese people, those who get little sun exposure, and people with gastrointestinal disorders (GI; affecting the stomach or intestines) like Crohn's disease or celiac disease are the ones most at risk for vitamin D insufficiency. Along with calcium, cholecalciferol (vitamin D3) is used to prevent and treat bone diseases like osteoporosis (a condition where the bones become thin and fragile and break easily), rickets (where bones soften and weaken in children due to vitamin D deficiency), and osteomalacia (where bones soften and weaken in adults due to vitamin D deficiency).

Ingredients and Medicinal Uses of Nutrela Vitamin D-2K:

Ingredient	Botanical name/ Preparation	Properties and action	Uses	Each chewable tablet contains
Dry Extract of:				
Shaileya (Lichen) (Wl. Pl.)	*Parmelia perlata*	Hridya, Vishaghna, Dahshamak, Raktavikar Har	• Cardiotonic • Anti-toxic • Alleviates burning sensation • Alleviates disorders of the blood	25 mg

Nutrela Vitamin D-2K is Useful in:

- **Vitamin D Deficiency**
- **Blood Disorders**
- **Allergies**

Nutrela Vitamin D-2K tablet: Description in Classical Texts:

Nutrela Vitamin D-2K tablets is prepared by using shaileya which is a lichen belong to family Parmeliaceae that can help alleviate disorders due to deficiency of vitamin D. Bhavaprakasha has included shaileya in Karpooradi varga. It is cold, good for heart, pacifies kapha and pitta doshas.

Scientific Evidence of Nutrela Vitamin D-2K:

The effect of Nutrela Vitamin D-2K supplementation by oral route, on the serum levels of 25-hydroxy-Vitamin D3, were evaluated in Wistar rats. The serum levels were compared with those obtained after oral administration of a marketed synthetic formulation. The serum levels of the measured analyte was evaluated prior to administration of the formulation at the time points of 0, 0.5, 1, 3, 6, 12, 24 hours, with an objective to capture the diurnal variation in the levels of 25-hydroxy-Vitamin D3. Subsequently, rats were administered either Nutrela Vitamin D-2K or the synthetic formulation at the doses of 60 and 200 IU/kg for 15-consecutive days. On day 15, blood was withdrawn from the rats prior to administration of the test articles and at 0.5, 1, 3, 6, 12 and 24 hours, post-administration. Nutrela Vitamin D-2K increased the serum levels of 25-hydroxy Vitamin D3 in a dose-related manner when compared with its basal levels, and the measured levels were comparable to the serum levels of the evaluated analyte, observed after the administration of the marketed synthetic formulation. The results of the study suggest that Nutrela Vitamin D-2K, a natural supplement of Vitamin D3 is as efficacious as a synthetic formulation in rats. Thus, Nutrela Vitamin D-2K is of potential utility in human subjects afflicted with Vitamin D deficiency.

Analysis of Nutrela Vitamin D-2K tablet by Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector technique showed the presence of main compound Vitamin D3 at 263 nm wavelength. In the chromatograms, blue line indicates the standards and pink line represents the test sample, as shown in Fig. 1.

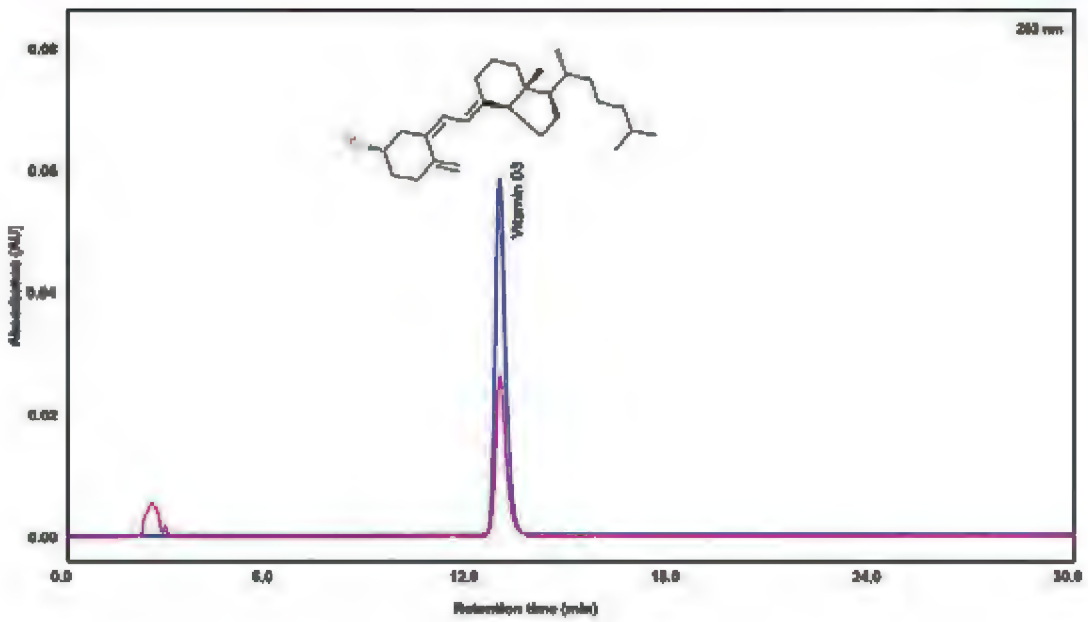


Fig. 1. Ultra High Performance Liquid Chromatography (UHPLC) equipped with Photo Diode Array (PDA) detector analysis of Nutrela Vitamin D-2K tablet. In the analysis of Nutrela Vitamin D-2K tablet, the main compound was observed Vitamin D3 (11.60 minutes) at 263 nm wavelength. In the chromatograms, the blue line represents standards and the pink line represents the test sample.

Dose and Method of Use of Nutrela Vitamin D-2K Tablet:

Dose and Frequency	1 capsule a day
Adjuvant	Luke warm water
Time of Administration	Post meals
Or as directed by the physician.	

PRF

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