



Review on Satpal Ghrita - A Ayurvedic Formulation as an Agnidipana

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Abstract

Many ayurvedic formulations are available in the market without any proper scientific evidence for its therapeutic effect. On this issue the Satpala ghrita was identified from the Indian Ayurvedic Formulary 2003, for which there were no scientific evidence to prove its efficacy in order to standardize the formulation. Each ingredient possesses a unique therapeutic activity. Grahani (Malabsorption syndrome), Udara (Diseases of abdomen / enlargement of Abdomen), Gulma (Abdominal lump), pliha (Splenic disease), Jvara (Fever), kasa (Cough), Svasa (Dyspnoea/Asthma), pandu (Anaemia), pinasa (Chronic rhinitis/sinusitis), mandagni (Impaired digestive fire), svayathu (Oedema). To standardize this ayurvedic formulation a detailed report of the ingredients has to be determined and in the present article we have tried to give detailed properties, which can be useful to know the therapeutic effect after standardizing.

Keywords

Satpala ghrita, Grahani (Malabsorption syndrome), Udara (Diseases of abdomen / enlargement of abdomen).

INTRODUCTION:

Ghrita is originated from its root word “ghr” which means bright or to make bright. Ghrita is Sanskrit name for clarified buttermilk; ghrita has great medicinal and nutritional value that’s why Ayurvedic text has mentioned ghrita under *ajaskrik rasyan* to be used in daily routine diet.

1. Ghrita has unique property of pacifying the vitiated vata and pitta dosha on the other hand it causes *agnidipana* means stimulate the digestive enzyme to increase appetite, digestion and absorption.
2. Modern researches have proved that lipid based formulation are more efficient carrier for drug delivery to the target organ system.

In Ayurvedic system of medicine mostly the drugs are given as medicated Ghrita (ghee). Each ingredient possesses a unique therapeutic activity. Grahani (Malabsorption syndrome), Udara (Diseases of

abdomen / enlargement of Abdomen), Gulma (Abdominal lump), pliha (Splenic disease), Jvara (Fever), kasa (Cough), Svasa (Dyspnoea/Asthma), pandu (Anaemia), pinasa (Chronic rhinitis/sinusitis), mandagni (Impaired digestive fire), svayathu (Oedema). The preliminary phytochemical analysis showed the presence of alkaloids, triterpenoids, and steroids^[1].

Ghrita is the best of all fats^[2]. It is one of the *Nitya Rasayanas* (can be consumed daily) mentioned in Ayurveda which possess multi-systemic benefits. It is a dietary supplement as well as a drug in its purest form and in combinations. It is sweet in taste, provide unctuousness and softness to the body tissues and cold in potency. The properties of Ghrita are to alleviate Vata and Pitta without increasing Kapha much. It enhances the digestive fire, improves eyesight, intelligence, memory, vitalizes the body and gives luster. It improves semen and Ojus - the

ultimate end product of assimilation. Ghrita is known best for treating poisoning, insanity, seizures, pain, fever, phthisis etc. it is said to reduce inauspiciousness and provide protection. The most highlighted property of Ghrita is that it assimilates the property of the drug added to it providing a synergetic action in combination^[3].

Ghrita as an individual drug and in combination is supposed to have desired effect in many of the diseases especially of psychiatric origin. It helps in stopping the disease of Unmada at the level of pathology, pathogenesis and manifestation. Ghrita can be included in daily diet in a larger quantity opposing the unhealthy dietary pattern contributing

to the etiology of Unmada. It can be administered as a treatment modality by which channelizes Vata and normalize Pitta. The channels to the mind are also cleared and thus reduce stress at physical and biological level. The property of ghee in enhancing cognitive abilities and balancing chemical changes in brain is appreciable. The various combinations with ghrita can be administered according to the aggravation of humors and the symptoms shown. All diseases are caused by deranged digestive fire. There is no drug like Ghrita which can enhance the fire. Ghrita which is the best among drug for oleation can correct the digestive fire, increase Satwa Guna (purest quality of mind) and cure the disease^[4].

Table No: 1 VERANCULAR NAMES OF INGREDIENTS IN SATPAL GHRTA

DRUG NAME	LANGUAGE	VERANCULAR NAMES
Pippali ^[5]	Sanskrit	Pippali, Magadhi, Kana, Usana
	English	Indian long pepper, Long pepper
	Hindi	Pipal, Pipli,
	Gujarati	Lindipipal, Pipli
	Marathi	Pimpli
	Bengali	Pipul, Pipli
	Sindhi	Tippali
	Malyalam	Pimpli, Tippali, Magadhi, Lada, Mulagu,
	Punjabi	Maghs- pipal, Pipal, Filfildaras, Drafilfil
	Telagu	Pippallu, pipili, Pippali katte
	Tamil	Pippili, Tippili, Kundan, tippili, Sirumulam, Pippallu.
	Kannada	Tipili, Hipli, yippali
	Arabian	Dra-filfil.
	Oriya	Baihehi, Krykola, Mogodha, Pippoli
	Persi	Filfilidray, Pipal, Filfil-i-daras
Santhal	Ralli	
Urdu	Pipul	
Pippali mula ^[6]	Sanskrit	Pippalimuula, piplamul, Pippali-Jataa, Granthi, Shadgranthi, Granthika, Maagadhi-muula, Kanaamuula, Krishnaamuula Pippaliamuula
	Bengali	Pipulmul
	English	Piper root, Indian Long Pepper roots
	Gujrati	Gantoda, Ganthoda
	Hindi	Piparamula
	Kannada	Modikaddi, Hippali, Tippali, Modi
	Malayalam	Kattuthipathe liver, Tippathe liveru
	Marathi	Pimplimula
	Oriya	Pippalimula, Bana Pippalimula
	Punjabi	Pippalimula, Magha
	Tamil	Kanda Tippili, Ambinadi Desavaram
	Telugu	Modi, Madikatta
Urdu	Filfil Daraz	
Unani	Bekh-Filfil Daraaz , Bekh-Daarfilfil, Peeplamool.	
Cavya	Sanskrit	Cavika
	Assamese	Chepaan
	Bengali	Chei
	English	Cubeb
	Gujrati	Chavka, Chavaka

	Hindi	Chavya
	Kannada	Kadumenasinaballi, Chavya
	Malayalam	Kattumulaku, Kattumulakunveru
	Marathi	Chavaka
	Oriya	Chainkath
	Punjabi	Chabak
	Tamil	Chavyam, Chevuyam
	Telugu	Chevayamu
	Urdu	Peepal Chab, Kababah
	Sanskrit	Agni, Vahni, Jvalanakhya, Krsanu, Huasa, Dahana, Hutabhuk, Sikhi
	Assamese	Agiyachit, Agnachit
	Bengali	Chita
	English	Lead war
	Gujrati	Chitrakmula
	Hindi	Chira, Chitra
	Kannada	Chitramula, Vahni, Bilichitramoola
Citraka ^[7]	Kashmiri	Chitra, Shatranja
	Malayalam	Vellakeduveli, Thumpokkoduveli
	Marathi	Chitraka
	Oriya	Chitamula, Chitoparu
	Punjabi	Chitra
	Tamil	Chitramoolam, Kodiveli
	Telugu	Chitramulam
	Urdu	Sheetraj Hindi, Cheetah
	Arabic	zanjabil, zanjabile-ratab, zanjabile-yabis
	Hindi	ada, adarak, adi, adrak, sindhi, sonth, aadu, adrakh, soonth alla, ardraka, hashi-shunti, hasisunthi, hasisunti, shuntee, sunti, vana-sunthi,
	Kannada	vanasunthi, vona-shunti, aardraka, hasi shunti, hasishunthi, khaara genasu, pali, shunthi, shunti, sonte, sonti, sundi, sunthi andrakam, chinchatakam, chinchiver, chukka, chukku, cukku, erukkilannu, inci,
	Malayalam	inji, inschi, sringiveram, tinkshnottham, ardrakam, cincatakam, cinciver, inchi, injee, inschikua, ischi, sryngiveram, tikshnottham
	Persian	zanjabile-khushk, zanjabile-tar adraka, anupama, apakrishnaka, ardraka, ardrakah, ardrakam, ardrakanagaram, ardrashaka, ardrika, chandrakhya, cukku, gulmamula, kandara, katubhadra, katukkata, machhaka, mahausadha, mahaushadha, mahija, mulaja, nagara, nagaraka, nagaram, rahuchhana, saikateshtha, sharnga, shringahera, shunthi, srangavera, sringa-beram, sringavera, sringveradrakam, srngabera, srngavera, sunti, sushakaka, vara, vishabeshajam, vishva-bhishagam, visva, visvaa, visvabhesaja, visvausadha
	Sanskrit	Inci
	Tamil	allam, allamu, ardrakamu, mahaushadamu, sonti, sringaberamu, sunthi,
	Telugu	aardrakamu, allumu, mahaushadhamu, shunthi, sonthi, sringabaeramu, sryngaberamu
	Tibetan	bca sga, bca-sga, bcasga, sga skya, sge u-gser ab adarak, darchini, sonth, zanjibil, ab adrak taza, abe-e-adrak, adrak bayraisha,
	Urdu	murraba-i-zanjibil, sonth nim kofta, tirkuta, zanjabil, zanjibil nim kofta, zanjibil saida, zanjibil sayida, zanjilbil, zinjibil, zufa-i-khushk
	English	Ginger
	Marathi	alem, alen, sunte
	Arabic	shaair, shair
	English	bear, pearl barley, whisk(e)y
	Hindi	jan, jaoo, jau, jav, jave, jaw, jawa, jow, suj
	Kannada	baarli, jave-godhi, jave-godi, javegodhi, yava
	Malayalam	barli, yavam
Yava ksara ^[10]		

Marathi	cevad, jav, java, saathu, satu
Persian	Jao
Sanskrit	aksata, akshata, dhanyaraja, divya, hayapriya, hayeshta, kanchuki, kancukin, medhya, pavitradhanya, praveta, shaktu, shvetashunga, sitashuka, sitrishuka, situshuka, tikshnashuka, tiksnasuka, turagapriya, yava, yavah, yavaka
Tamil	akkatam, aricikkotumai, baarli, barley, barliharisi, barliharisi, barliharishi, barliharisi, cavvukkotumai, evakkotu, evataniyam, iyavam2, kattukkotumai, parili, parli, parliarici, parliyarici, varkotumai, vilattira, yava, yavam, yavam 2, yavataniyam
Telugu	barlibiyam, dhanuabhedam, dhanyabhedam, pachcha-yavulu, pachchayava, pachhayava, yava, yavaalu, yavaka, yavala
Tibetan	Nas
Urdu	arad jao, jao, jao muqashar nim kofta, jav

Table 2: GEOGRAPHICAL SOURCE OF INGREDIENTS IN SATPAL GHRTA

PLANT NAME	GEOGRAPHICAL SOURCE
Pippali ^[11,12]	The source plant of Pippali mula (<i>Piper longum</i> Linn.) is a native of Indo-Malaya region. It grows wild in the tropical rain forests of India, Nepal, Indonesia, Malaysia, Sri Lanka, Malaysia, Singapore, Bhutan, Myanmar Timor and the Philippines. In India, the plant grows abundantly in Assam, West Bengal, Uttar Pradesh, Madhya Pradesh, Maharashtra, Kerala, Karnataka and Tamil Nadu. It is also cultivated in Andhra Pradesh, Bengal, Chirapunchi area of Assam, Akola-Amravati region of Maharashtra, Anamalai hills of Tamil Nadu, Orissa, Udipi and Mangalore regions of Karnataka.
Cavya	It was cultivated mainly in Southern India. Common in thickets at low altitudes throughout the Philippines. Also found in Indo-China and the Malay Peninsula to the Moluccas.
Citraka ^[13]	It is found throughout India; much cultivated in wild in the W. peninsula and probably in Bengal, Malay peninsula, Ceylon –tropics of the old world.
Sunthi ^[8,9]	<i>Zingiber officinale</i> is widely distributed to tropical Asia. In India, it is cultivated mainly in Kerala, Andhra Pradesh, Uttar Pradesh, West Bengal and Maharashtra. The plant is also cultivated in China, Nepal, US, India, Bangladesh, Taiwan, Jamaica, Nigeria and some other parts of world. Some reports suggest that the climate conditions of Orissa, West Bengal, North Eastern states and Kerala are more suitable for the growth of <i>Z. officinale</i> in India. In India, different types of Indian ginger are available like Cochin ginger (light brown or yellowish grey); Calicut ginger from Malabar (orange or reddish brown, resembling African ginger) and Kolkata ginger (greyish brown to greyish blue).
Yava ksara ^[10]	This species is probably native to Middle East and is cultivated in many places. Within India, it has been cultivated since long in northern India. It can be grown in the plains as well as in the hilly regions of the Himalayas, up to an altitude of 4200 m. The bulk of the crop is concentrated in the Indo-Gangetic area and the adjoining tracts of Madhya Pradesh. The chief producing States, in the order of importance, are Uttar Pradesh, Rajasthan, Bihar, Punjab and Madhya Pradesh. Other States producing barley are West Bengal, Himachal Pradesh, Jammu & Kashmir and Bombay.

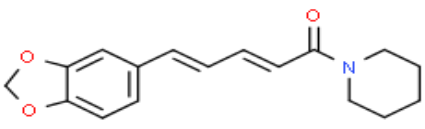
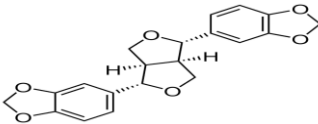
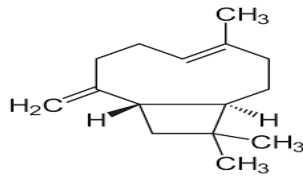
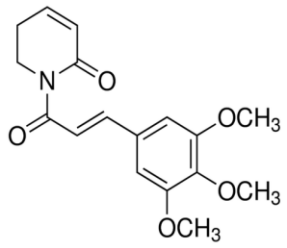
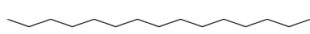
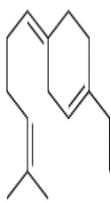
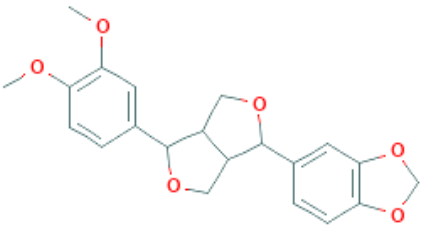
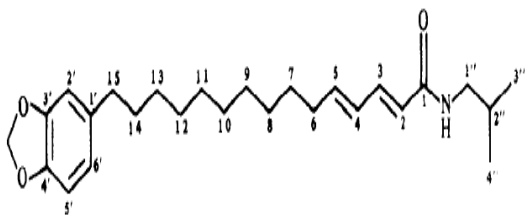
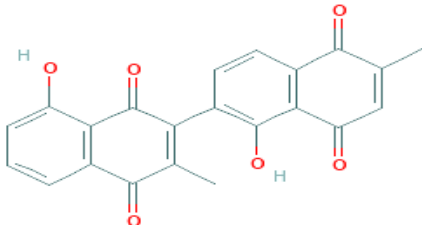
TABLE 3: PHARMACOLOGICAL ACTIVITY OF INGREDIENTS IN SATPAL GHRTA

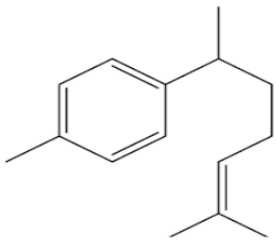
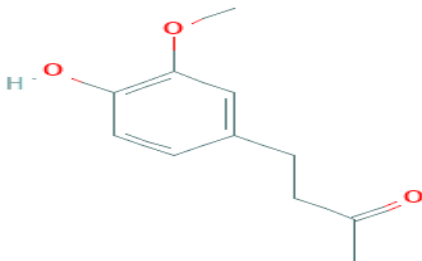

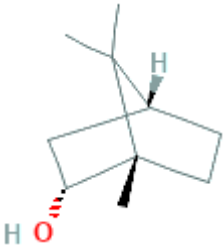
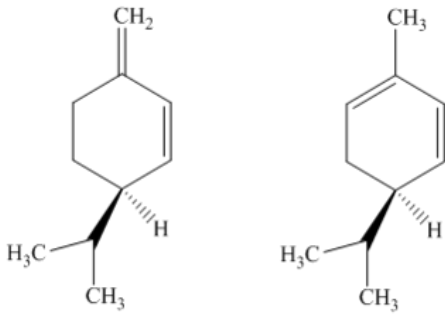
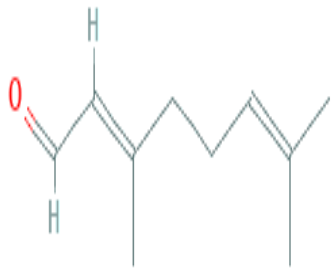
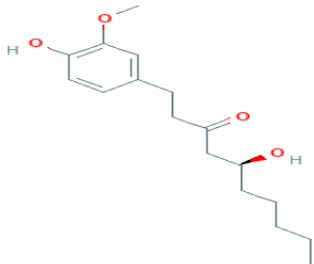
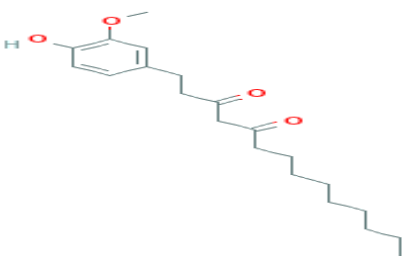
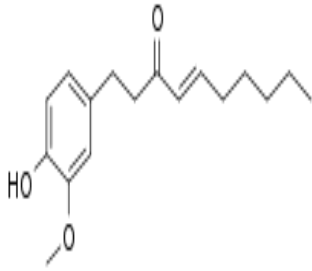
Plant name	Pharmacological activity	Reference	Year
Pippali & Pippala mula	Anti-bacterial activity ^[14]	Reddy srinivasa <i>et al.</i>	2001
	Anti-microbial activity ^[15]	M. Abbas Ali, Noor Mahbub Alam <i>et al.</i>	2007
	Anti-oxidant activity ^[16]	S.C jagdale, B.S kuchekar, <i>et al.</i>	2009
	Anti-amoebic activity ^[17]	Rao C and Nigam S.	1968
	Anti-inflammatory activity ^[18,19]	Bull. Sharma A and Singh R.	1980
	Immuno modulatory activity ^[20]	Mamta Kumari, Ashok B. K <i>et al.</i>	2012
	Hypocholesterolaemic activity ^[20]	Mananvalan G and Singh J.	1979
	Anti-cancer activity ^[21]	C.R. Pradeep & G. Kuttan.	2002
Citrika	Anti-asthmatic activity ^[22]	Banga S, Garg L, Atal C.	1964
	Anti-inflammatory activity ^[23]	Oyedapo OO	1996
	Hyperglycaemic effect ^[24]	Olagunju JA, Kazeem OW <i>et al.</i>	2000
	Central nervous system stimulatory action ^[25]	Bopaiah CP, Pradhan N	2017
	Anti-bacterial activity ^[26]	Van der Vijver LM, Lotter AP	2001
	Digestive and appetizing property ^[27]	yengar MA, Pendse GS	1971
	hypolipidaemic and anti-atherosclerotic effect ^[28]	Sharma I, Gusain D, <i>et al</i>	1991
Sunthi	anti-tumour activity ^[29]	Krishnaswamy M, <i>et al.</i>	1980
	Anti-microbial activity ^[30]	Durga R, Sridhar P <i>et al.</i>	1990
	Anti-diarrhoeal activity ^[31]	Daswani PG, BrijeshS, Tetali P <i>et al.</i>	2010
	Anti-diabetic and hypolipidaemic activity ^[32]	Al-Amin ZM, Thomson M, Al-Qattan KK, <i>et al.</i>	2006
	Anti-inflammatory and Anti-nociceptive activities ^[33]	Vendruscolo A, Takaki I, <i>et al.</i>	2006
	Anti-oxidant activity ^[34]	Al-Katib SM, <i>et al.</i>	2009
	Anti-bacterial activity ^[35]	Karteek P, Jahnvi V, <i>et al.</i>	2012
	Anti-parasitic activity ^[36]	Forouzan S, <i>et al</i>	2012
	Hepato protective activity ^[37]	Sakr SA, <i>et al.</i>	2011
	Anti-depressant activity ^[38]	Pratap SR, Ritesh J, <i>et al.</i>	2012
Yava ksara	Effect on male reproductive functions ^[39]	Saeid JM, Shanoon AK, <i>et al</i>	2011
	Larvicidal activity ^[40]	Khandagle AJ, Tare VS, <i>et al.</i>	2011
	Gastroprotective effect ^[41]	Nanjundaiah SM, <i>et al.</i>	2011
	Cardioprotective activity ^[42]	Ansari MN, Bhandari U, Pillai KK.	2006
	Anti-atherosclerotic activity ^[43]	Braun L, Cohen M.	2007
	Anti-hypercholesterolemic activity ^[44]	H. J. Whyte, R McArthur, and P. J. Nestel.	1991
	Cholesterol biosynthesis inhibition ^[45]	Qureshi A. A., <i>et al.</i>	1986
	Diuretic activity ^[46]	A., L. M. Giron, and A. M. Martinez.	1987
	Fatty acid synthase inhibition ^[47]	Quewshi, A.A., T. D. Crenshaw, <i>et al</i>	1987
	Glucose tolerance effect ^[48]	Li J., T. Kaneko, L. Q. Qin, J. Wang, <i>et al</i>	2003
Hypocholesterolemic activity ^[49]	Newman, R.K., S. E. Lewis, C. W. Newman, R. J. Boik, and R. T. Ramage.	1989	
Yava ksara	Hypotriglyceridemic activity ^[50]	Lupton, J. R., M. C. Robinson, <i>et al.</i>	1994
	Laxative effect ^[51]	Luptn, J. R., J. L. Morn, <i>et al.</i>	1993
	Lipid metabolism ^[52]	Li J., T. Kaneko, <i>et al.</i>	2003

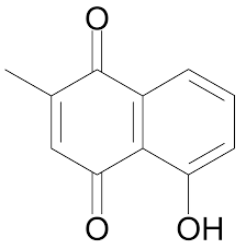
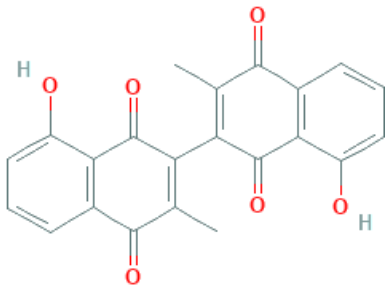
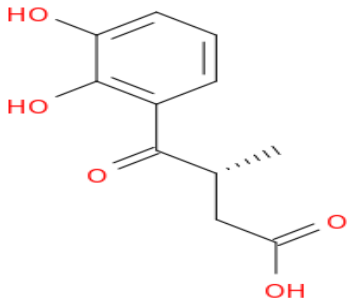
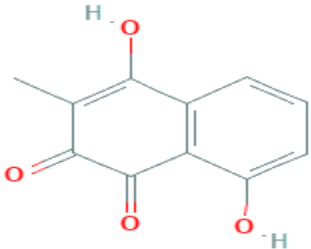
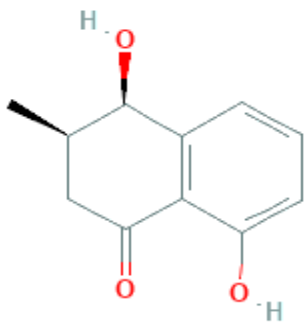
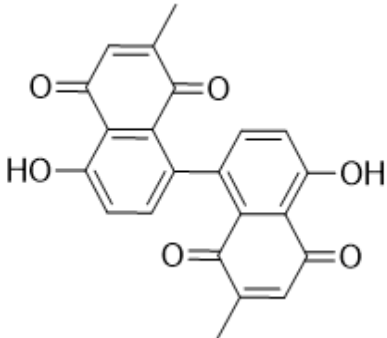
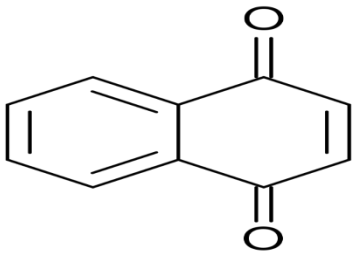
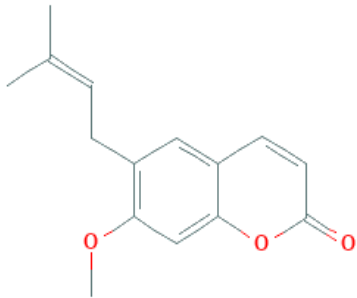
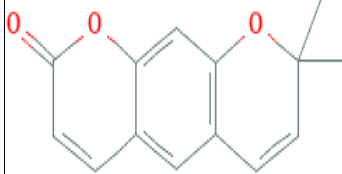
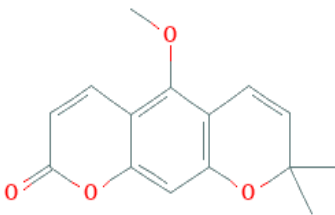
TABLE 4: PHYTOCHEMICAL CONSTITUENT OF INGREDIENTS IN SATPAL GHRTA

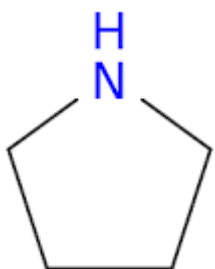
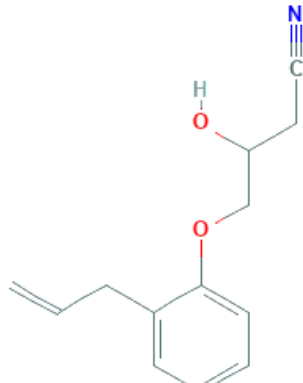
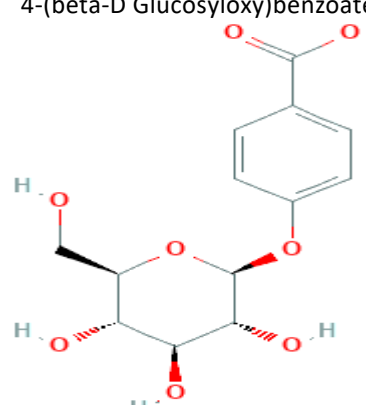
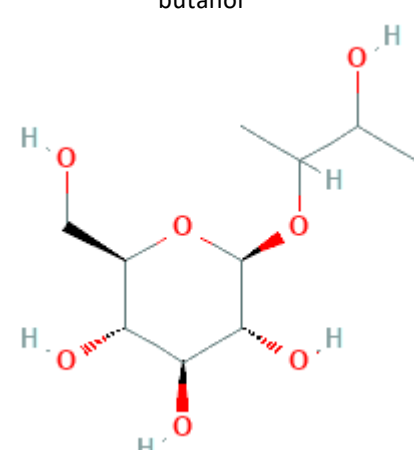
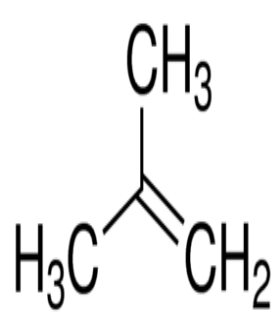
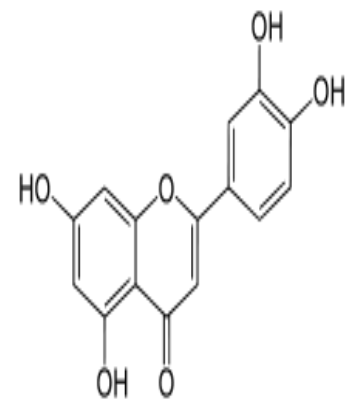
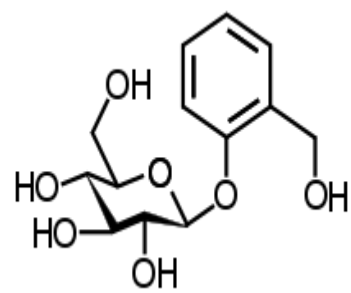
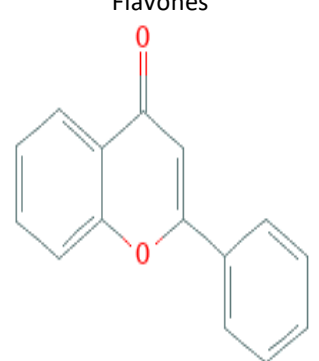
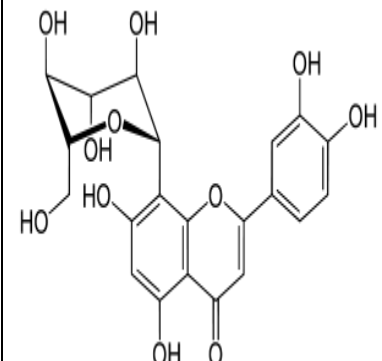
Plant name	Chemical constituent	Author	Year
	Piperine is the major and active constituent of long pepper (<i>Piper longum</i>). The piperine content is 3-5% (on dry weight basis) in <i>P. longum</i> fruit ^[53] .	Maitreyi Zaveri, Amit Khandhar <i>et al</i>	2010
Pippali & Pippala mula	Piperine, piperlongumine, tetrahydropiperlongumine, trimethoxy cinnamoyl-piperidine, and piperlonguminine have been found in the root. Lignans: The main lignans present in the fruits are sesamin, pulviatilol, and fargesin. Volatile oils: the three major components are caryophyllene, pentadecane (both about 17.8%), and bisabolone (11%) ^[54] .	Chauhan Khushbu, Solanki Roshni <i>et al</i> ,	2011
	Various compounds isolated from different Piper species have been classified under twelve categories, viz. alkaloids/amides, propenylphenols, lignans, neolignans, terpenes, steroids, kawapyrones, piperolides, chalcones and dihydrochalcones, flavones, flavanones and miscellaneous compounds ^[55] .	Parmar VS, Jain SC, Gupta S, <i>et al</i>	1998
Cavya	Alkaloids, Glycosides and Steroids: Two new unsaturated amides, brachystamides-A and B, were isolated from the total above-ground parts of <i>Piper brachystachyum</i> ^[56] .	Avijit Banerji <i>et al</i> .	1989
Chirta	Plumbagin, 3, 3-biplumbagin, 3-chloroplumbagin, chitranone, plumbagic acid, elliptinone, droserone, isoshinanolone, maritinone, 4-naphthoquinone, suberosin, Xanthyletin and xanthoxyletin ^[57] .	Sadhana Singh, Apurva Priyadarshi <i>et al</i>	2018
Sunthi	1-2% volatile oils – zingiberine, zingerone, camphene, borneol, phellandrene, citral. Pungent principle: gingerol, gingerdiones, shogaols ^[58] .	Shaikh Imtiyaz1, Khaleequr Rahman <i>et al</i> .	2013
Yava ksara	Seeds- Cyanogenic glycoside characterized as 2-β-D-glucopyranosyloxy – methyl – (2R) – butyronitrile, ubiquinones, proanthocyanidins, glycosides of hordatines A & B, procyanidin B3, trimer of procyanidin C2, prodelphinidin, chrysoeriol, hordeumin, pangamic acid, protein, carbohydrates, calcium, phosphorus, iron. Leaves- Arabinogalactan (4-O-methylglucuronate) – xylan, cyanogenic glucoside, 6'' – sinapoylsaponarin, 6''-feruloylsaponarin and 4' – glucosyl – 6'' – sinapoylsaponarin, 2''-O-glycosylisovitexin. Whole plant- p-coumaroylagmatine, hordenine and its derivative, pyrrolidine, luteolin glycoside, flavones glycosides orientoside and orientin, cynoglucosides-3-β-D-glucopyranosyloxy-2-methylpropene, 4-β-D-glucopyranosyloxy-3-hydroxyl – 3-hydroxymethylbutyrobitrile ^[10] .	Kumari Rajesh, Singh Manju <i>et al</i> .	2016

TABLE 5: CHEMICAL STRUCTURE OF INGREDIENTS IN SATPAL GHRTA

Pippali & Pippala mula		
Piperine 	Sesamin 	Caryophyllene 
Piper longumine 	Pentadecane 	Bisaboline 
Fargesin 		
Cavya		
Brachystamide 	Chitranone 	

Sunthi		
<p>Zingiberine</p> 	<p>Zingerone</p> 	<p>Camphene</p> 
<p>Borneol</p> 	<p>Phellandrene</p> 	<p>Citral</p> 
<p>Gingerol</p> 	<p>Gingerdione</p> 	<p>Shogaol</p> 

Citrika		
<p>Plumbagin</p> 	<p>3, 3-biplumbagin</p> 	<p>Plumbagicacid</p> 
<p>Droserone</p> 	<p>Isoshinanolone</p> 	<p>Maritinone</p> 
<p>1,4 Naphthoquinone</p> 	<p>Suberosin</p> 	<p>Xanthyletin</p> 
<p>Xanthoxyletin</p> 		

Yava Ksara		
<p>Pyrrolidine</p> 	<p>Hydroxymethylbutyronitrile</p> 	<p>4-(beta-D Glucosyloxy)benzoate</p> 
<p>3-beta-D-Glucopyranosyloxy-2-butanol</p> 	<p>2- Methylpropene</p> 	<p>Luteolin</p> 
<p>Glycoside</p> 	<p>Flavones</p> 	<p>Orientin</p> 

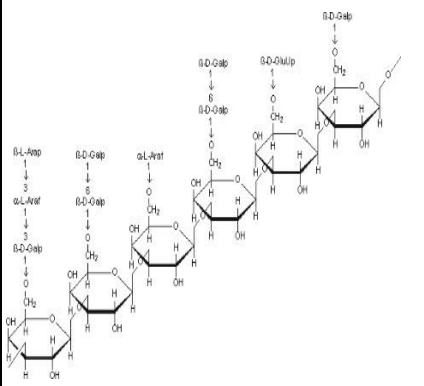
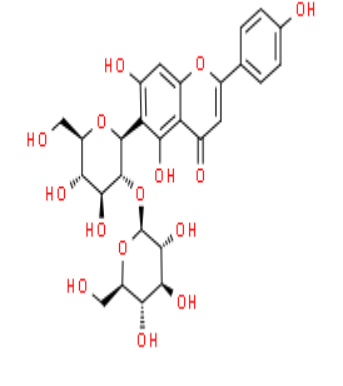
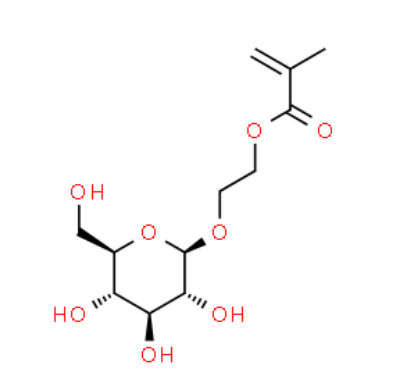
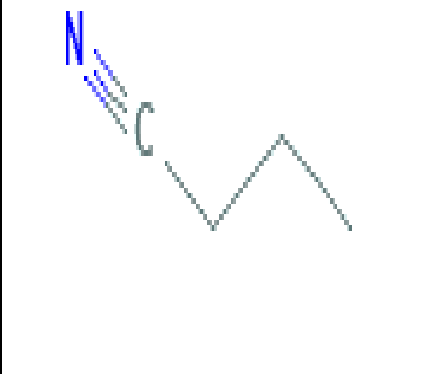
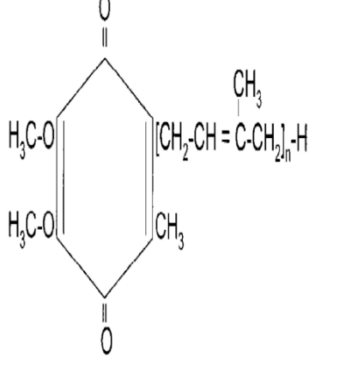
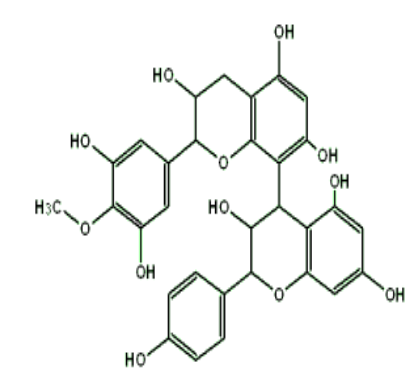
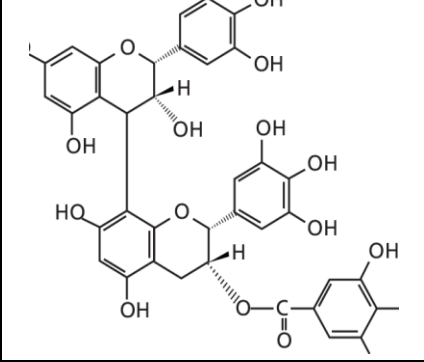
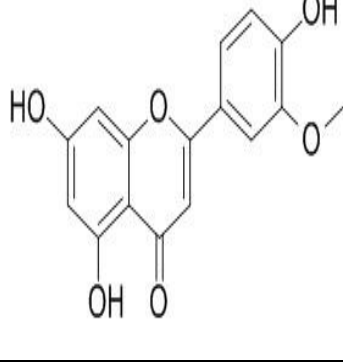
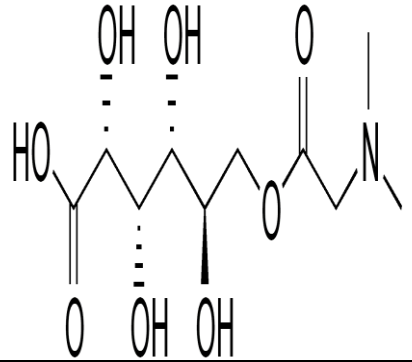
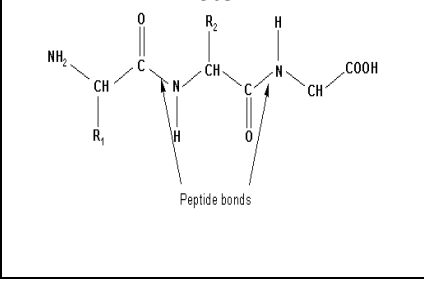
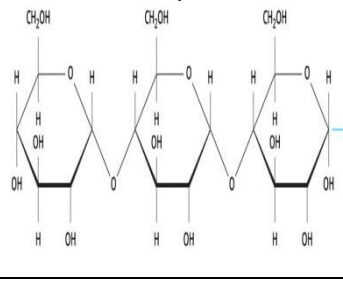









<p>Arabinogalacto(4 - 0 - methylglucuro) - xylan</p> 	<p>2''-O-(β-D-glucosyl) isovitexin :</p> 	<p>2-(β-D-Glucopyranosyloxy)ethyl methacrylate</p> 
<p>Butyronitrile</p> 	<p>Ubiquinones</p> 	<p>Proanthocyanidins</p> 
<p>Prodelphinidin</p> 	<p>Chrysoeriol</p> 	<p>Pangamic acid</p> 
<p>Protein</p> 	<p>Carbohydrate</p> 	

TABLE 6: MORPHOLOGY OF INGREDIENTS IN SATPAL GHRTA

INGREDIENTS	PLANT PART	
Pippali and Pippala mula ^[6,54,58] 	ROOT 	Small shrub with a large woody root
	LEAVES 	The leaves are alternate, spreading, without stipules and with blades varying greatly in size. The lowest leaves are 5–7 cm long, whereas, the uppermost are 2–3 cm long.
	STEM 	Numerous creeping, jointed stems that are thickened at the nodes.
	FLOWER 	Flowers grow in solitary spikes.
	FRUITS 	Grow In fleshy spikes 2.5–3.5 cm long and 5 mm thick, are oblong, blunt, and blackish-green.
	PART USED	Immature spikes, roots and seeds
	AYURVEDIC PROPERTIES	<i>Rasa:</i> Katu (pungent) <i>Guna:</i> Laghu (light), snigdha (unctuous), tikshna (sharp) <i>Veerya:</i> Anushnashita (slight cold) <i>Vipaka:</i> Madhur (sweet) <i>Dosha:</i> Pacifies <i>kapha</i> and <i>vata</i>
ORGANOLEPTIC PROPERTIES	Cream white, externally it is brownish grey in colour; odour strong, characteristic causing irritation in nose; taste pungent. Fracture: short.	
Cavya	STEM	Shows a thin cork consisting of 3-4 layers of rectangular, brownish cells
	PARTUSED	Stem
	AYURVEDIC PROPERTIES	Rasa : Katu Guna : Laghu, Ruksa, Tiksna Virya : Usna Vipaka : Katu Karma : Bhedana, Dipana, Kaphahara, Pacana, Recana, Vatahara

	ORGANOLEPTIC PROPERTIES	Greyish-brown; shows fragments of vessels, fibres and simple, round to oval starch grains, measuring 3-14 n in diameter.
Citraka [7,59] 	ROOT 	Roots are 30 cm or more in length, 6 mm or more in diameter, reddish to deep brown, scars or rootlets present; bark thin and brown, internal structure striated.
	LEAVES 	thin, 3.8-7.5 by 2.3-3.8 mm, ovate, subacute, entire, glabrous, somewhat glaucous beneath, reticulately veined, shortly and abruptly attenuated into a short petiole, petiole narrow; amplexicaul at the base and there often dilated into stipule like auricles.
	SEED	Oblong.
	FLOWER 	Flowers are white in colour with five petals.
	FRUITS	Capsule, Oblong, Pointed; pericarp thin below, thick and hardened above.
	PART USED	Root Bark
	AYURVEDIC PROPERTIES	Ras (Taste) : Katu (Bitter) Guna (Properties) : Laghu (light), Tikshan (Which penetrates very fast) Viraya (Action) :Ushna (Hotness) Vipaka (Post digestive effect) :Katu (Bitter)
	ORGANOLEPTIC PROPERTIES	internal structure striated, odour, disagreeable, taste, acrid
Sunthi[8,9,60,61] 	RHIZOME 	stout, tuberous, horizontal, branched, fleshy, aromatic, white or yellowish to brown
	LEAVES	Leaves are pointed, narrowly or linearlanceolate, approx 20 cm long and 1.5 - 2cm wide, clasping the stem by long sheaths
	STEM	Stem is leafy, thick, about 60 cm high
	FLOWER	flower has only one short stalked, fertile stamen and solitary stigma.

	FRUITS	which is rarely formed, is a dehiscent capsule containing relatively large seeds. It requires hot, moist climate and rich, well-drained soil
	PART USED	Rhizome
	AYURVEDIC PROPERTIES	Rasa- katu Guna- Laghu, Snigdha, Guru, Ruksha, Teekshna(Ardraka) Virya- Ushna Vipaka- Madhura Doṣāghnata- Vatakaphashamaka Karma- Sheetaprashamana, Shothahara, Vedanasthapana, Nadiuttejaka, Vatashamaka, Rockana, Deepana, Pachana, Triptighna, Vatanulomana, Shoolaprashamana, Arshoghna, Bhedana, Grahi, Hridya, Svarya, Shleshmahata, Shwasahara, Vrishya, Ullejaka, Jwaraghna..
	ORGANOLEPTIC PROPERTIES	Creamish yellow- spicy and aromatic odour-fine touch- pungent taste.
Yava ksara ^[10,62]	ROOT	Roots are fibrous, 0.5 to 0.1 cm thick, cylindrical, glabrous and grayish brown in colour.
	LEAVES	Leaves are few, linear- lanceolate in shape about 15 to 25cm long, yellowish- grey in colour, upper one is close to the spikes and its sheath is striate and ligules are short and membranous.
	STEM	Stem is Cylindrical, 0.4 to 0.6 cm thick, slightly flattened and Smooth
	FLOWER	It is hollow between nodes and develops five to seven nodes below head. Nodes are short and bearing sheath. Internodes are long and shining yellowish in colour
	FRUITS	caryopsis, elliptic, 9 cm long, short pointed, smooth and free or adherent to palea or both to lemma. The grains are tightly enclosed and adhering the lemm
	PART USED	Fruit
	AYURVEDIC PROPERTIES	Rasa- Madhura, Tikta, Kashaya Guna- Ruksha, Pichhala, Mṛidu, Anabhiṣyandi, Sara Virya- Sheeta Vipaka- Katu Doṣāghnata- Kaphapittahara, Vatakara Mala prabhava- Bahupuriṣakara, Mutra dosha hara Karma- Lekhana, Medovatahara, Medha vardhaka, Vṛiṣya, Balya, Sthairyakṛta, Varṇya, Swarya, Agni/agnidipana, Kasaswas- pinasa har, Kanṭha rogahara, Tṛiṣa hara, Twaka roga hara, Vraṇepathyam and Urusthambahara.
ORGANOLEPTIC PROPERTIES	pale-greenish-yellow; odour, not distinct; taste, sweetish-acrid	

TABLE 7: ETHNOPHARMACOLOGY OF INGREDIENTS IN SATPAL GHRTA

Plant Name	USES	REFERENCE
Pipapali & Pippali Mula ^[11,12,54]	In Ayurveda, Pippali mula is attributed dipaniya (Appetizer) – Pachaniya (digestive) properties and considered as the prime drug to relieve Anaha (Constipation). The drug possesses Katu Rasa (pungent taste); Laghu (Light), Ruksha (rough) and Ushna (hot) guna (properties); Madhura vipaka (Specific digestion) and used in various disease conditions i.e. Krimi (parasitic disease), shwasa (dyspnoea), Kshaya (Pulmonary tuberculosis), Pliha roga (spleen disorders), Vishama jvara (intermittent fever), Arsha (piles), Urustambha (stiffness of thigh), Vatavyadhi (Nervous diseases), Nidranasha (Insomnia), Grahani (Dysentery) etc. Vangasena, a medieval compendium identified sedative property of Pippalimula and suggested it with jaggery as anupanna (vehicle). Pippali mula have been used as stomachic, thermogenic, aphrodisiac, carminative, expectorant, laxative, digestive and emollient, anti-giardias, antiamoebic, anti-asthmatic, antiseptic and also active against bacterial diseases. The root is reported to have weak opioid but potent NSAID type of analgesic activity, anti-oxidant activity, antimicrobial ^[11] .	Krutika Joshi, <i>et al</i> ,
	Parts used: Immature spikes, roots and seeds Dried unripe fruits are used as an alternative to tonic. Decoction of immature fruits and roots is used in chronic bronchitis, cough and cold. Roots and fruits are also used as anti-dote in snake biting and scorpion sting. An equal part of powdered seeds of <i>Embelia ribes</i> , fruit of <i>P.longum</i> L. and borax powder has been used as an Ayurvedic contraceptive. <i>P. longum</i> L. has been used in traditional remedies as well as in the Ayurvedic system of medicine against various disorders ^[12] .	Maitreyi Zaveri, <i>et al</i> .
	The unripe fruit is sweetish, cooling and useful in biliousness. The ripe fruit is sweet, pungent, a stomachic, aphrodisiac, alternative, laxative, antidiarrhoeic, antidycentric, is useful in vata and kapha, asthma bronchitis, abdominal complaints, fevers, leucoderma, urinary discharges, tumours, piles, diseases of the spleen, pains, inflammation, leprosy, insomnia, jaundice, hiccoughs, tubercular glands and reduces biliousness. The roots and fruits are used in palsy, gout and lumbago. The root has a bitter, hot and sharp taste. It is used as a carminative, a tonic to the liver, stomachic, emmenagogue, abortifacient, aphrodisiac, haematinic, diuretic, digestive, and as a general tonic, useful in inflammation of the liver, pains in the joints, umbago, snakebite, scorpion-sting and night-blindness (in the Unani System of medicine). ^[54]	Chauhan Khushbu <i>et al</i>
Cavya	Arsa, Anaha, Gulma, Krimi, Udara Roga, Pliha Roga, Sulal.	
Chitrak[7,59]	Chitrak is one of the powerful digestive and carminative herbs of Ayurveda. It is used in most of Ayurvedic medicines for indigestion. In colic and as an appetizer ^[59] .	Sadhana Singh, Apurva Priyadarshi <i>et al</i> .
	Grahaniroga, Piles, Diarrhoea, Udararoga, Oedema, Cough, Hoarseness of voice, Prameha, Wind in stomach, As Rasayana, Kustha, Vitiligo, Aneamia, Filaria, Abscess, Obesity ^[7] .	Yadav Chhavi, Chaubey Suresh <i>et al</i> .

Sunthi[8,9,60,61]	<p>Flatulence, Rheumatism, Throat infections, Dyspepsia, Cold, Cough, Gout, Gastritis, Irritable bowel syndrome, Nausea, vomiting, Diarrhoea, Influenza, Migraine, Intestinal colic, Toothache, Impotence, Motion sickness, Arthritis, Asthma, Bronchitis.^[9]</p>	<p>Shaikh Imtiyaz, Khaleequr Rahman, <i>et al.</i></p>
	<p>Indian traditional medicinal remedies especially for cough and asthma consists of juice of fresh ginger with a little juice of fresh garlic mixed with honey. It is also suggesting 1-2 tea spoons of ginger juice with honey is a potent cough suppressant. Besides these ginger is very often used to cure many illness such as indigestion, tastelessness, loss of appetite, flatulence, intestinal, nausea, vomiting, allergic reactions, acute and chronic cough, common cold, fever, allergic rhinitis, sinusitis, acute chronic bronchitis, respiratory troubles, pain, headache, backache or any kind of muscular catch, painful tooth and swelled gum etc.^[61]</p>	<p>Subash kumar Gupta, <i>et al.</i></p>
	<p>Ginger is carminative, pungent, stimulant, used widely for indigestion, stomach ache, malaria and fevers. It is chiefly used to cure diseases due to morbidity of Kapha and Vata. Ginger with lime juice and rock salt increases appetite and stimulates the secretion of gastric juices. It is said to be used for abdominal pain, anorexia, arthritis, atonic dyspepsia, bleeding, cancer, chest congestion, chicken pox, cholera, chronic bronchitis, cold extremities, colic, colitis, common cold, cough, cystic fibrosis, diarrhoea, difficulty in breathing, dropsy, fever, flatulent, indigestion, disorders of gallbladder, hyperacidity, hypercholesterolemia, hyperglycemia, indigestion, morning sickness, nausea, rheumatism, sore throat, throat ache, stomach ache and vomiting. Ginger forms an important constituent of many pharmacopoeial Ayurvedic formulations.^[60]</p>	<p>Mohammad Sharif Moghaddasi, <i>et al.</i></p>
	<p>Ginger is used widely in Ayurveda to cure many of the illness such as indigestion, tastelessness, loss of appetite, flatulence, intestinal, biliary colics, nausea, vomiting, allergic reactions, acute and chronic cough, common cold, fever, allergic rhinitis, sinusitis, acute and chronic bronchitis, respiratory troubles, pain, headache, backache or any kind of muscular catch, painful tooth and swelled gum^[8]</p>	<p>Gaurav Kumar <i>et al.</i></p>
Yava Ksara[62]	<p>It is an Ayurvedic medicine, used in treating urinary diseases, abdominal pain, bloating, etc. Yava is used as Pathya diet in Prameha (Diabetes), Sthoulya (Obesity), Hridroga (Heart diseases)</p>	<p>Rahul Jain, <i>et al.</i></p>

CONCLUSION:

Allopathic and Ayurvedic medicines are having a huge difference in the aspect of treatment. Advantage of ayurvedic medicines are having less side effect than allopathic medicines. For economically poor countries like India cannot afford drug based medicines and due to the many side effects. Ayurvedic medicines can be affordable with less side effects. With all these advantages of ayurvedic medicines it is still lagging back due to the lack of scientific evidence with poor research. Likewise, there is a huge advantages of allopathy by its diagnostic techniques and surgery which ayurvedic medicines cannot compete. Thus both

systems have to workforce with each other for the treatment of many diseases.

Oral dosage forms of ayurvedic system medicine are more preferred than allopathic system of medicine. Ayurvedic formulation are more potent than allopathic formulations which have been proved its potency and good health in many biological conditions, but the standardization is to be taken care due to its properties and stability. From the present review it has been concluded that like ghrita can be best drug for oleation which can correct the digestive fire, increase Satwa Guna (purest quality of mind) and heal the disease.

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