

## Standardization of Simhanada Guggulu

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### ABSTRACT

The best herbo mineral medicine of Simhanada guggulu. is one of the Ayurvedic drug is selected by Ayurvedic classical book of Bhishajya Ratnavali, it is one of the best medicine in Amavata. So, this drug study on base of Standardization of the Simhanada guggulu. This medicine is content by six drugs on base of herbal and mineral drugs, these drugs are mode of action in Amavata. The study of standardization of Simahnada guggula like Phytochemical Evaluation, Physicochemical constants, determination of solubility test, fat content, Organic analysis, detection of carbohydrates, etc. and Thin Layer Chromatographically of extracts study (TLC).

### INTRODUCTION

Ayurveda is a science of Life not a science of disease and it is the difference between the science of Life and science of diseases that elevates Ayurveda to its unique position. It encompasses the centre gamete of human life, not limited to the Physical aspect alone bitaming at developing man's total personality. With a view of to achieve above aims & Objectives. A different type of drugs found in nature from the Natural resources has been used by the ancient scholars. The drugs of herbal origin come first in the series because of their easy availability and easy processing. During the distant past, these have occupied a prominent place in the Ayurvedic therapeutics. After some time potentiate the action of herbal drugs, the minerals are used in different compounds in their later parts.

In present days commercial market substandard products are available, may be because of adulteration controversial drugs, Subtitle and lack of availability of original and proper raw materials.

As there are drugs of standard parameters and recognized formula with scientific data not provided for the preparation, it is difficult to control will every from batch to batch and from one pharmacy to another.

It is therefore essential to lay down correct parameters for setting up pharmacopoeia standard like,

- 1) The physical constants are much useful to lay down the pharmacopoeia standards of the drugs.
- 2) The organic analysis will be of much use to understand the responsible constituents for active principle of the drug.
- 3) The chromatography will be useful to identify the genuineness of the drug.

Guggul is exudates [Niryasa] obtained from the plant of Commiphore mukul and Simhanada guggulu is an important Ayurvedic preparation with guggulu which is used in all types of Vata Vyadhis. (Diseases of Nervous System) Kapha rogas, Gulma, Shula, Vatarakta and mainly in Amavata. In this competitive field many scholars have tried to find out a medicine for patients and numbers of products are available in the market but exact pharmacopeial standards are to be established. Therefore, standardization by chemical and chromatographically analysis and clinical study was undertaken.

- 1) To standardizes the Simhanada Guggulu
- 2) To assess the clinical efficacy of Simhanada Guggulu in Amavata.
- 3) To provide the scientific for ancient formulation and an alternative medicine in Amavata.

## MATERIAL AND METHODS

Simhanada guggulu is herbo mineral Ayurvedic drug. Its ingredients are Haritaki, Amalaki, Bibhitaki, Shudda Guggulu, Shudda gandhaka, Murchita Erenda taila.

Water for decoction, Simhanada guggulu prepared by classical method, Simhanada guggulu prepared in tablet form size is 500 mg, Table 1 ingredients and quantity of medicine,

- 1) Pharmacological activity
- 2) Physicochemical study
- 3) Photochemical study
- 4) Chromatographical study

Organic Analysis, Extraction method, Organic tests for Alcoholic Extract.

- 1) Detection of Alkaloid, --Mayer's Test, Dragendroff's Test. Wagner's Test, Hager's Test
- 2) Detection of Carbohydrates: Moloch's Test, Fehling Test
- 3) Detection of Steroids – Liebermann Bur chard's Test: Liebermann Bur chard's Test
- 4) 4)Detection of saponins
- 5) 5)Detection of Tannins
- 6) 6)Test for Carotenoids
- 7) 7)Test for Flavonods
- 8) 8)Tests for Triterpenoids

**Table 1: Ingredients of Simhana guggulu**

Ingredients	Used part	Quantity of drugs
Haritaki	Fruit marrow Phala majja	1pala
Bibithaki	Fruit marrow Phala majja	1pala
Amalaki	Fruit marrow Phala majja	1pala
Shudda Guggulu	Niryasa	1 pala
Shudda Gandhaka	Amavasara gandhaka	1 pala
Murchita Erenda taila	Oil	8 pala
Water	---	480 pala

**Table 2: Pharmacological activity of Shimanada Guggulu**

Ingredients	Parts	Rasa	Verya	Vipaka	Guna	Vata	Pitta	Kapha
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Haritaki	1	M,T,K	U	M	Sn,G	-	-	-
Bibitaki	1	M,Kas	U	M	Sh ,Ru	-	-	-
Amalaki	1	M,A,K, Ka.	S	M	Sh ,G	-	-	-
Shudda Gandhaka	1	K,M,T	U	K	L,Sn	-	-	-
Shudda Guggulu	1	K, T	U S (Ch)	K	Ru,L,P, Su	-	-	-
Murchita Erenda Thaila	8	M,K,Ka	U	M	Sn,Tik	-	-	-

M=Madhura, A=Amla, La=Lavana, K=Katu, T=Tikta, Ka=Kashaya, G=Guru, L=Laghu, Ru=Ruksha, Pi= Pichila,U= Ushna  
 Sn=Snigdha, Sh=Sheeta, Tik=Tikshna, Sa=Sara, V=Visada, Su=Sukshma

**Table 3. Physico- Chemical Constants of Simhanada Guggulu**

SI No	Physical Contents	Simhanada Guggulu
1	Total ash	2.3433
2	Acid insoluble ash	0.0033
3	Water insoluble ash	9.2 mg
4	Fat	1.909mg
5	Resin	51.89 %

**Table 4 :Chemical Constituents of Simhanada Guggulu Present in Different Extracts**

SI no	Components detected	Methanol	Water	Alcohol	Chloroform	Toluene	Petroleum ether
1	Alkaloids	+ve	-ve	+ve	-ve	-ve	-ve
2	Carbohydrates	+ve	+ve	+ve	+ve	+ve	-ve
3	Tannins	+ve	+ve	+ve	-ve	-ve	-ve
4	Saponins	+ve	+ve	-ve	+ve	-ve	+ve
5	Carotenoids	-ve	-ve	-ve	-ve	-ve	-ve
6	Steroids	-ve	-ve	+ve	+ve	+ve	+ve
7	Flavonoids	+ve	-ve	+ve	+ve	-ve	-ve
8	Triterpenoids	+ve	+ve	+ve	+ve	+ve	+ve

**Table 5: Rf values of Simhanada Guggulu**

SI No	Extract	Solvent system	Develops	Rf value
		70:30		
1	Petroleum ether	Chloroform: Benzene	Iodine Vapors	.80,.61,.9,.12
2	Alcohol	Chloroform: Benzene	Iodine Vapors	83,.58
3	Methno	Chloroform: Benzene	Iodine Vapors	.83,.66,.50,.19
4	Chloroform	Chloroform: Benzene	Iodine Vapors	.9,.76,26,.19,
5	Toluene	Chloroform: Benzene	Iodine Vapors	.92,.76,.23,.15

6	Water	Chloroform: Benzene	Iodine Vapors	.23
1	Petroleum ether	Petroleum ether: Sol ether	Iodine Vapors	91.77.625.24.125
2		80 : 20		
	Alcohol	Petroleum ether: Sol ether	Iodine Vapors	96.87.73.59.16.08
3	Methanol	Petroleum ether: Sol ether	Iodine Vapors	96.86.67.51.22
4	Chloroform	Petroleum ether: Sol ether	Iodine Vapors	.91.58.38.14
5	Toluene	Petroleum ether: Sol ether	Iodine Vapors	.93.63.42.23
6	Water	Petroleum ether: Sol ether	Iodine Vapour	.95.22.11
1	Petroleum ether	Chloroform: Benzene: Actic Acid	Iodine Vapour	.87.75.54.22
		2 : 4 : 1		
2	Alcohol	Chloroform: Benzene: Actic Acid	Iodine Vapors	.88.43.36.
3	Methanol	Chloroform: Benzene: Actic Acid	Iodine Vapors	.92.62.22
4	Chloroform	Chloroform: Benzene: Actic Acid	Iodine Vapors	.90.71.47.17
5	Toluene	Chloroform: Benzene: Actic Acid	Iodine Vapors	92.76.5.17
6	Water	Chloroform: Benzene: Actic Acid	Iodine Vapors	.92.23.12

## RESULT

Simhanada Giggulu is Katu, Thikta, Kshara rasa, Katu vipaka, Ushna veerya, its properties are Amavata nashaka, Tridoshagna, Kasa, Kanja, Kushta, Panguta, Shula, Swasa, Gulma nashaka due to the properties.

## DISCUSSION

Different Qualitative tests were conducted to know the chemical constituents present in simhanada guggulu. Mayer's Hager's, Wagner's and Dragendroff's tests were conducted these tests shown the presence of alkaloids in methanol and alcohol extracts. Reducing sugars were present in water and alcohol extracts. Moloch's test was conducted it shown the presence of carbohydrates in methanol, water alcohol, chloroform toluene extracts and absent in petroleum ether extracts shown the presence of tannins foam index test shown the presence of saponins in methanol, water, flavonoids were present in methanol alcohol and conducted for triterpenes it shown the presence of triterpenes in all the extracts. Carotenoids were absent in all the extracts. Liebermann bur chards test was conducted for steroids alcohol chloroform and petroleum ether extracts were shown the presence of steroids, aqueous methanol and toluene shown the absence of steroids.

The TLC pattern obtained by using various solvent system shown a good separation of active constituent. These may be used as finger print data for the assuming the quality of drug. These finger print data may be used by small scale manufacture who cannot afforded large investment on HDLC & HPTLC.

## CONCLUSION

- 1) Physio- chemical constants of simhanada gijggulu shown fat content 1.909, resin content 51089 %, specific gravity 0.8090, ash value 2.3703. Water insoluble ash 9.21% and acid insoluble ash 0.013.

- 2) Organoceptive characters of simhanada guggulu -colour yellowish, taste and odour - sour - hard in touch
- 3) Sihmhanada guggulu contents components like different extracts - alkaloid reducing sugars, carbohydrates, tannins, steroids flavonoids and triterpenes.
- 4) Chromatograph data : TLC reveals that TLC may be used as finger print data for the assessment of quality of Simhanada guggulu.

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