

KALPANA NIRMANA II

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CO	LEARNING OBJECTIVES	PO
CO1,CO5	Explain the basic principles involved , processing techniques,quality control parameters used/ involved in the preparation of Avaleha, Kalpana with examples ,instruments used in small and Large scale production,Research updates	PO1,PO5,PO7, PO2,PO8,PO9
CO1,CO5	Explain the basic principles involved , processing techniques,quality control parameters used/ involved in the preparation of Sneha Kalpana, Kalpana with examples ,instruments used in small and Large scale production,Concept of Avartana, Research updates on Snehakalpana, Market survey	PO1,PO5,PO7, PO2,PO8,PO9
CO1,CO4	Describe the Significance of sandhana kalpana, classification, Difference between Madya and Shukta Kalpana, general method of preparation, essential ingredients, Anukta Mana, Sandhana Vidhi, observations, Burnig candle test, Lime water Test, difference between Asava and Arishta, essential knowlege of sale and clinical practice , Research updates	PO3,PO5,PO7, PO2,PO8,PO9 PO1,PO6
CO1,CO3,CO 5	Explain Definition , significance of Pathya, types, general, method of preparation Manda, Peya, Yavagu, Vilepi, Anna or Odana Kalpana, Krushara, Yusha, Takra, Khada, Kambalika, Raga, Shadava, Related Research updates, Market survey of Dietary Supplements and Nutraceuticals	PO3,PO5,PO7, PO2,PO8,PO9 PO1,PO6

- SNEHA KALPANA
- SANDHANA KALPANA
- AVLEHA KALPANA
- PATHYA KALPANA

Sneha Kalpana

Introduction

- ❖ The nomenclature of sneha kalpana is sum of words 'sneh' and 'kalpana' where sneha means fat or fatty material and kalpana stands for pharmaceutical process of medicaments.
- ❖ The substance which is called sneha dravya will be having guru, shita, sara, snighda, manda, sukshma, mrdu, drava gunas.
- ❖ ghrta kalpana and taila kalpana are included in sneha kalpana.

Components essential for preparation of sneha

- ❖ Drava dravya (A liquid which may be one or more as kasaya, swarasa, dughda, etc..)
- ❖ Kalka (A fine paste of the drug or drugs.)
- ❖ Sneha dravya (ghrta, taila, etc.)

General preparation of Sneha Kalpana

- ❖ First of all sneha should undergo the sammurchana.
- ❖ The kwatha is to be added to the murchita sneha paka is to be done.
- ❖ Dughda, kalka, has to be mixed with with sneha according to their sequence and sneha paka is to done.
- ❖ Gandha dravyas are mixed at the end.
- ❖ Equal to the sneh quantity water is to be added and sneha paka is done over mrdwagni till total water content is evaporated

SANDHANA KALPANA

CONCEPT OF S. KALPANA

DEFINITION

SANDHANA --- *Sandheeyate yad iti sandhanam*
KALPANA --- Process

*द्रवेषु चिरकालस्थं द्रव्यं यत्सन्धितं भवेत्
आसवारिष्टभेदैस्तु प्रोच्यते भेषजोचितं*

(Sharangdhara)

FERMENTATION

Incomplete oxidation of sugar into alcohol & CO₂ in the absence of O₂ by Enzyme Inverase and zymase, secreted by yeast cells.



FERMENTATION

- Zymology = Science of Fermentation.
- First Zymologist : –Louis pasteur.
In 1857 ,connected Yeast to fermentation =Respiration without air.
- Germon Zymologist, Edward Buchner.(Nobel prize winner.)1907
Fermentation by Zymase of Yeast.

YEAST

It is Anaerobes.

-unicellular

- Depending upon strains of yeast tolerance varies from 5-21%

-brewer S yeast 5% alc tolerate

-wine yeast tolerate upto 12%

Yeast dies when alc exceeds its tolerance level and due to insufficient nutrients.

- yeast grows in pH 3-6.

Imp Microbes for Fermn.-Yeast-Saccurus cerevisiae.

-Zymomonas mobilis.

Yeast Sacchromyces cervisicae found in dhataki puspa.

Inoculum of yeast comes from dhataki puspa.

SIGNIFICANCE OF SANDHAN KALPANA

- **Acts self generated alcohol as preservative.**
- **Aqueous & Alcohol soluble Plant principles extractable.**
- **Stimulate & Activate enzymatic activity in the body.**
- **Liquid form-Facilitates easy admin of drug to children.**
- **Make drug-Readily absorbable.**
- **Jaggery, Grapes etc enhance palatability & nutritional value.**

AVALEHA KALPANA

Introduction

- लिह् आस्वादने ।
- Dosage form which is neither too thin nor too thick
- Lick-able i.e. semisolid consistency
- Avaleha has been derived from the root word “lih aswadane”. Which means lickables which has good taste.
- It's a Upakalpana of Kwatha kalpana.

- क्वाथादीनां पुनः पाकात् घनत्वं सा रसक्रिया।
सो अवलेहश्च लेहः स्यात् तन्मत्रा स्यात्
पलोन्मिता ॥

शा.सं.म.८/१

Any liquid preparation(kwath, swarasa etc) if boiled and reduced to a thicker consistency, then the thicker mass obtained is called rasakriya, By adding madhura dravya obtained drug is called Avaleha.

Avaleha kalpana was first described by **Acharya Charaka** & it was widely used as Rasayana by charaka, Sushruta, Vagbhata. **Acharya Kashyap** has given importance to this kalpana & he has described separate chapter Leha adhyaya in Sutrasthana. But pharmaceutical principle was firstly described by **Sharangadhara** in Sharangadhar Samhita.

- Other names for Avaleha are Rasakriya, Leha, Lehya, Avalehya, Ghana.

Ingredients

1. Drava dravya: Aqueous medium: kashaya, swarasa or any liquid preparation
2. Madhura dravya: Substrate: Sugar, Sugar candy, Jaggery
3. Praksepa Aushad dravyas: Powdered drugs (rich in volatile principles which makes it palatable)
4. Sneha dravya: Lipid medium: Ghrita and Tilataila
5. Additives: Honey, Tila taila, Salts, kshara, Bhasmas.

Ingredients of avalaha



Drava Dravya

*Asneha pradhana : kwatha ,
swarasa ,
gomutra , jala
Sneha pradhana :
grita , taila*



Madhura Dravya

*Sita ,guda ,
ikshurasa and
madhu*



Prakshapa Dravya

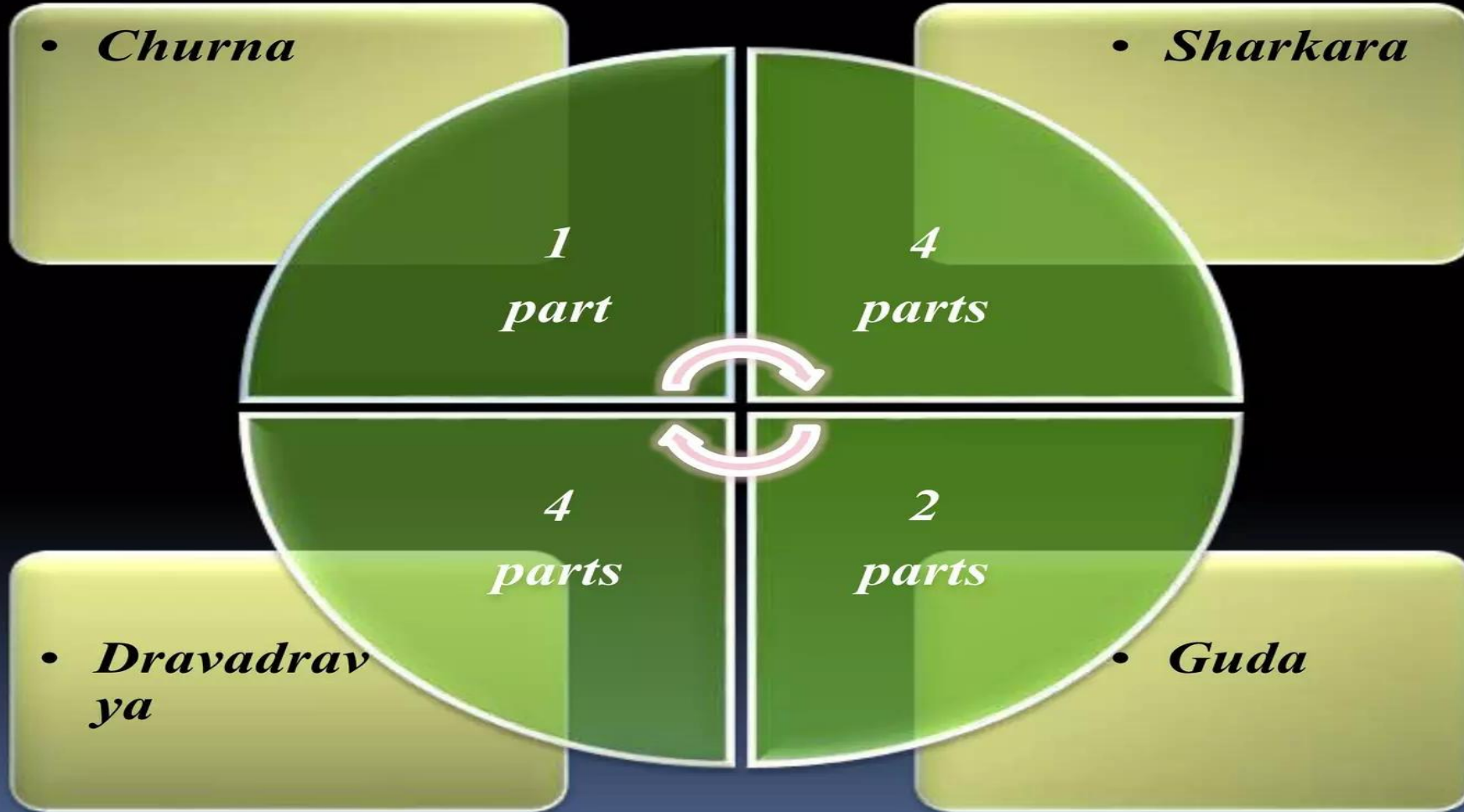
*Samanya –
Kashthaushadi.
Vishesha -
Rasaushadhi*

*Yoga
vahi
,Softn
ess
,self
life ,*

*Bioav
ailabi
lity,
thera
peutic
effica
cy ,
ruchi
kara*

*Palatable , increases self life
, gives instant energy*

Anukta mana



Aaharo Mahabhaishajyam Kashyap Samhita Kh. 4/6

Ahara sthitikaaranam- cause of stability of all the life forms

Praninam prandharanam- sustains the life of living beings

Annamatrena narah kartum niramyah- with food alone one can cure the patient

Bheshajoppanne niraharo na shakyte- without diet even medicine does not work

Thus ahara is considered the greatest medicament by the physicians.