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Critical review on *Sneha Kalpana* w.s.r. to *Kalyanaka Ghrita*

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ABSTRACT

Rasa Shastra and *Bhaishajya Kalpana* is the branch of *Ayurveda* that deals with Pharmaceuticals. It deals with the preparation of different dosage form. *Sneha Kalpana* is one of dosage prepared by *Taila* and *Ghrita* with addition of different plants and liquid media, they were very extensive range of diseases among patients of all age groups. *Sneha Kalpas* preparation in *Ayurvedic* pharmaceuticals are used widely for medicinal as well as cosmetic purposes. It is used to extract the fat soluble, water soluble, or even the chemical constituents which are soluble in various media and active principles from the raw material, enhance and absorption of drugs, when used topically in fat media. *Kalyanaka Ghrita* is a polyherbal formulation mentioned in various *Ayurvedic* texts, and it is widely and effectively used by *Ayurvedic* physicians in the management of a wide array of disorders. Here, we provide a critical review of *Sneha Kalpana* process in reference to *Kalyanaka Ghrita*.

KEYWORDS

Conceptual study, Sneha kalpana, Murchana, Paka and Paka Siddhi



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INTRODUCTION

Sneha Kalpana is the combination of two words *Sneha* and *Kalpana*. *Sneha* means fat or fatty material and *Kalpana* stands for pharmaceutical process of medicaments. *Kalpana* is a process through which a raw material converted into medicinal form according to the necessity of the physician. *Sneha Kalpana* is defined as “A pharmaceutical process to prepare oleaginous medicaments from the substances like *Kalka* (paste of herbs), *Kwatha* (prepared decoction) or *Drava Dravya* (any liquid) taken in definite proportion and by subjecting them to unique heating pattern and duration to complete certain pharmaceutical parameters, according to the need of therapeutics. This process ensures that the absorption of the active therapeutic properties is obtained from the ingredients which are used into the *Sneha media*¹.

Sources of *Sneha Dravyas*²-

As per *Acharya Charaka* the *Sneha Dravyas* are classified according to their source of origin as–

1. *Sthavara* (Vegetable origin)
2. *Jangama* (Animal origin)

Sthavara Sneha- It is obtained from different parts of the plants like. Fruits, bark, seeds, leave etc. Seeds of *Tila* (*Sesame indicum linn*), *Eranda* (*Ricinus*

linn), *Sarsapa* (*Brassica nigra Koch*), *Atasi*, *Karanja* (*Pongamia Pinnata*), *Shahjan* (*Moringa oleifera linn*) etc. are the sources of oil of *Sthavara* Kingdom.

Jangama Sneha- It is obtained from animals, fishes & birds etc. as follows

1. *Ghrita*
2. *Vasa* (fat)
3. *Majja* (bone marrow)

As per *Acharya Charaka* fishes, birds, and deer are sources of *Jangama Sneha*. Obtained curd, milk, *Ghrita*, meat, fat & bone marrow are administered as *Snehas*.

Classification of *Sneha Dravyas*-

Sneha dravyas may be divided under three headings-

1. On the basis of Nature of media³- *Ghrita*, *Taila*, *Vasa*, *Majja*, *Yamaka Sneha* and *Chatuh Sneha*.
2. On the basis of stages of *Paka*- *Aam Paka*, *Mridu Paka*, *Madhya Paka*, *Khara Paka* and *Dagdha Paka*.
3. On the basis of types of utility- *Pana*, *Anuvasana*, *Abhyanga*, *Shirobasti*, *Uttarbasti*, *Nasya*, *Karnapurana* and *Dharana*

Generally in ayurveda *Sneha* is used are of four types-

Sarpi (*Ghrita*), *Taila*, *Vasa* and *Majja* are the best unctuousness of all.

(1) *Ghrita*– *Ghrita* - Clarified butter

- (2) *Sneha*- Oils- Unsaturated butter
- (3) *Vasa*- Enemata- Animal fat - lard
- (4) *Majja*- Snuff- Bone marrow

Historical background of *Sneha Kalpana* and *Kalyanaka Ghrita* –

***Charaka Samhita*⁴**- Acharya Charaka clearly mention about the method of preparation of *Sneha kalpana*, type of *Sneha paka*, *Snehasiddhi lakshana* and uses of *Sneha kalpana* in different therapeutics. He also describe about *Kalyanaka Ghrita* there ingredients and uses in *Chikitsa sthan* 9th.

***Sushruta Samhita*⁵**- *Sushruta* clearly describes about the *Sneha paka vidhi*, ratio of *drava*, *kalka* and *Sneha* and give characteristic feature of *Sneha paka lakshana* and there uses. Description of *Kalyanaka Ghrita* is given in the reference of snake poisoning in *Kalpasthan* 6th.

***Ashtanga Hridaya*⁶**- In *Ashtang Hriday* the detailed knowledge of methods of *Sneha paka*, *Snehasiddhi laksana* types and uses of *Sneha paka* are given in *Kalpa siddhisthana* 6th chapter. Therapeutically use of *Kalyanaka Ghrita* in *Unmada* is given in *unmada pratishedha adhyaya* 6th chapter of *uttartantra*.

***Ashtanga Sangraha*⁷**- *Vagbhatta* describe in detailed about *Sneha* and its uses in *Sutrasthan* chapter 25th. He describes

about *Kalyanaka Ghrita* in *uttartantra* of *unmad pratishedh adhyaya* 9th chapter with its ingredient and its uses.

***Kashyapa Samhita*⁸**- Detailed knowledge about *Sneha* is given in *Sutrasthan* chapter 22 and He also describe about *Kalyanaka Ghrita* in *Leha adhyaya* of *Sutrasthan*.

***Sharangdhar Samhita*⁹**- The detailed and accurate knowledge of *Sneha kalpana* are given in *Sharangdhar samhita madhyama khand* chapter 9th. Here each and every thing is clearly describe as like the ratio of *Sneha*, *kalka*, *drava dravya*, types of *Sneha paka*, *Sneha siddhi lakshana* uses of *kalpana* and all other things which are related with *Sneha kalpana* are given in this chapter. *Paniya kalyanaka Ghrita* are given in the therapeutically use of epilepsy.

***Chakradutta*¹⁰**- *Chakrapani* describe about *paniya kalyanaka Ghrita in unmada chikitsa prakarana*.

***Bhaishajya ratnawali*¹¹**- First of all describe about the methods of *Sneha murchana*. Give detailed knowledge of *Sneha paka*, ratio of *kalka* there method of preparation, *Sneha* and ratio of *drava dravya*. The description of *Kalyanaka Ghrita*, uses and there ingredients are given in *unmada rogadhikara* which is taken from *charak*.

***Bharata bhaishajya ratnakara*¹²**- The reference of *Kalyanaka Ghrita* are given in first part of *Bharat bhaishajya ratnakara* of

kakaradi Ghrita with their ingredients and therapeutic uses.

Rasatantrasara avam Siddhaprayoga samgraha¹³- The brief knowledge of *Sneha kalpana* are given in *Ghrita*, *Taila prakarana* and description of *Kalyanaka Ghrita* their ingredients, doses and uses are also given.

Ayurveda sarasamgraha¹⁴- *Ayurveda sarasamgraha* give the brief knowledge of *Sneha kalpana*, *Snehapaka*, *paka lakshana* and also give the knowledge of *Ghrita murchana*. Also describe the *Kalyanaka Ghrita* with their ingredients and uses.

Bhavaprakash¹⁵- *Acharya Bhavamishra* only gives the therapeutic use of *Kalyanaka Ghrita* in part II *chikitsa prakarana* of *unmada adhikara* chapter 22.

Yogratnakara¹⁶- *Acharya* describes in *purvardh* the properties of *Ghrita*, *Taila* and He also explain the uses of *Kalyanaka Ghrita* in *unmada chikitsa prakarana*.

Ayurvedic Pharmacopoea of India¹⁷ and **Ayurvedic Formulary of India**¹⁸- General method of preparation of *Sneha kalpana* are given in brief of *Ghrita* section of API parts II volume I, II, and III and AFI part I, II and III and detailed methods of preparations of *Kalyanaka Ghrita* and its pharmacopoeal properties are given in API part II volume I in *Ghrita* section. In AFI part I the detailed knowledge of doses with its *anupana* and

therapeutic uses of *Kalyanaka Ghrita* are given.

Primary knowledge of *Sneha* and its properties, source of origin, types, etc., is clearly mentioned.

Systematic method of preparation, types of *Snehapaka*, proportions and Siddhilakshana of *Sneha Kalpana*, and their uses is discussed in this samhita. In CharakaVimanSthana, 7th, separately *Sneha siddhi lakshana* is mentioned. Different

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General method of Preparation of *Sneha Kalpana*:

Sneha Paka process may be divided in three phases:

- (1) *Sneha Murchana*
- (2) *Sneha Paka*
- (3) *Paka Siddhi*

***Sneha Murchana*:**

Sneha Murchana is a unique procedure carried out on uncooked *Sneha* before subjecting it to *Sneha Kalpana*. The concept of *Murchana* is found in *Dipika* commentary of *Sharangdhara* which was written in later parts of 14th century. *Bhaishajya Ratnavali* deals in detail about

the *Sneha Murchana* concept of *Ghrita* and different oils used for therapeutic purpose. Since no obvious reference are find for *Sneha Murchana* concept in *Brihatrayi* or *Laghutrayi*. *Bhaishajya Ratnavali* is the first text, which described the importance and method of *Murchana* process¹⁹.

Process of *Sneha Murchana (Ghrita/Taila)* is necessary before starting the *SnehaPaka*. Prepare the *Kalka* and *Kwath* of the drugs for according to the disease. Along with it prepare the *Kalka* of *Gandha dravaya* and also use the milk of cow, goat, buffalo and *Swaras* for the best result. Keep all these drugs in stainless steel vessels and put them on *Mandagni*. When *Sneha* become free from water, and passes the *Sneha siddhi Lakshana* remove it from the stove and filter it in hot stage from the cloth. In brief we can say that *Sneha Murchana* is the procedure where in the raw *Sneha (Oil or Ghrita)* is boiled with the coarse powder of selected medicinal drug and desired quantity of water to get rid of *Ama* and *Gandha dosha* present in it²⁰.

***Ghrita Murchana*²¹:**

Ingredients:

- *SnehaDravya - Go Ghrita* 1 - part
- *Kalka Dravya-* 1/16 Part of each, *Haritaki, Vibhitaki, Amlaki, Musta, Haridra* and *Matulunga Swarasa*.
- *Drava Dravya-* 4 part of water

Table 1 Ingredients of *Ghrita Murchana*

S.n	Name of Ingredients	Latin Name	Parts used	Ratio
1.	<i>Haritaki</i>	<i>Terminalia chebula</i> Retz.	Pericarp (p.)	1/16
2.	<i>Vibhitaki</i>	<i>Terminalia belerica</i> Roxb.	p.	1/16
3.	<i>Amalaki</i>	<i>Emblica officinalis</i> Gaertn.	p.	1/16
4.	<i>Musta</i>	<i>Cyperus rotundus</i>	Root	1/16
5.	<i>Haridra</i>	<i>Curcuma longa</i> Linn.	Rhizome (Rz.)	1/16
6.	<i>Matulunga</i>	<i>Citrus medica</i>	Fruit	1/16
7.	<i>Ghrita</i>	Clarified butter from cow's milk	-	1
8.	Water	RO Water	-	4

Procedure: For the preparation of *Go-Ghrita murchana*, first of all take all the mentioned ingredients in dry form and make them moderately fine powder to pass from sieve number 44. After that it was grinded with sufficient quantity of *Nimbu Swarasa* by adding little amount of water to make *Kalka* (homogenous blend). Then *Go-Ghrita* is taken in a stainless-steel vessel and heated in mild temperature. The *Kalka* was mixed with the vessel containing *Ghrita*. *Ghrita Murchana* is carried out in *Mandagni* till the appearance of *Siddhi Lakshana*. After filtration it is stored in air tight glass jar.

Sneha paka

Sneha Paka is a phenomena in which we take the *Murchita Sneha (Ghrita, Tail)* first, then *Kalka* and lastly *Drava dravya* is added. This is the order for addition of basic ingredients to prepare a formulation. *Acharya Sushruta* and *Vagbhatta* have followed the method of adding all basic ingredients simultaneously.

AIM²²

- To extract lipid soluble active principle from the drugs.
- To make use of therapeutic values of Oil/*Ghrita*.
- To enhance the shelf life of *Sneha* preparation.
- To enhance the drug absorption.
- To make the preparation more palatable and pleasing with good odour.
- Increase the bioavailability of drugs due to its *Sukshma, Vyavayee Gunas*.

***Sneha Kalpana*- Essential ingredients:**

1. ***Kalka Dravya:*** In the case of fresh and wet drugs *Kalka* is prepared by pounding them in *Khalva yantra*. However, in the case of dry drugs, the fine powder of these drugs is triturated with required quantity of water to prepare *Kalka*.
2. ***Sneha Dravya:*** *Sneha dravya (Oil or Ghrita)* is taken 4 times to that of *Kalka dravya*.
3. ***Drava dravya:*** *Drava dravya* is taken 4 times to that of *Sneha*. The *Drava dravya* might be water, any of the other,

natural liquids or any of the liquid preparations.

General method of preparation:

Kalka: A green or dry drug should be converted into coarse powder form by rubbing, chopping or grinding with or without water, is called *Kalka*.

Method:

Green Drug (Fresh): Drugs are collected and cleaned with water then cut it and converted in to paste form with the help of *Khalva Yantra*.

Dry Drug: Drugs should be taken in a prescribed ratio converted into powder

form then water is added to make it into paste form.

1. Used as a dosage form for internal administration.
2. Pharmaceutically it is used in *Sneha Kalpana* and *Avaleha Kalpana* etc.
3. As a *lepa Kalpa* it is used in *Vrana*, *Shotha* etc.

Drava-dravya: Any of natural liquid or the classical liquid preparation can be used as *drava-dravya*. A method of *Kwatha* preparation is separately explained by *Shrangdhara Samhita* in chapter of *Sneha Kalpana*.

Table 2 Ingredients of *Kalyanaka Ghrita* ²³.

S.n	Plants name	Botanical name	Parts use	Quantity
1.	<i>Haritaki</i>	<i>Terminalia chebula</i> Retz.	Pericarp (p.)	1 part
2.	<i>Vibhitaka</i>	<i>Terminalia belerica</i> Roxb.	p.	1 part
3.	<i>Amalaki</i>	<i>Emblica officinalis</i> Gaertn.	p.	1 part
4.	<i>Visala</i>	<i>Citrullus colocynthis</i> Scharad.	Fruit (Fr.)	1 part
5.	<i>Bhadraila (Sthulaila)</i>	<i>Amomum subulatum</i> Roxb.	Seed (Sd.)	1 part
6.	<i>Devdaru</i>	<i>Cedrus deodara</i> (Roxb.) Loud.	Heart wood, (Ht.wd)	1 part
7.	<i>Elvaluka</i>	<i>Prunus avium</i> L.	Stem bark,	1 part
8.	<i>Svetasariva</i>	<i>Hemidesmus indicus</i> R. Br.	Root (Rt.)	1 part
9.	<i>Krsnasariva</i>	<i>Cryptolepis buchmani</i> Roem&Schult	Rt.	1 part
10.	<i>Haridra</i>	<i>Curcuma longa</i> Linn.	Rhizome (Rz.)	1 part
11.	<i>Daruharidra</i>	<i>Berberis aristata</i> Dc.	Stem (St.)	1 part
12.	<i>Salparni</i>	<i>Desmodium gengeticum</i> Dc.	Rt.	1 part
13.	<i>Prisnparni</i>	<i>Uraria picta</i> Desv.	Rt.	1 part
14.	<i>Phalini (Priyangu)</i>	<i>Callicarpa macrophylla</i> Vahl.	Infloresence,	1 part
15.	<i>Nata (Tagara)</i>	<i>Valeriana wallichii</i> Dc.	Rt.	1 part
16.	<i>Brhati</i>	<i>Solanum indicum</i> Linn.	Whole, (Pl.)	1 part
17.	<i>Kustha</i>	<i>Saussurea lappa</i> C.B. Clark	Rt.	1 part
18.	<i>Manjistha</i>	<i>Rubia cardifolia</i> Linn.	St.	1 part
19.	<i>Nagakesara</i>	<i>Mesua ferrea</i> Linn.	Stmn.	1 part
20.	<i>Dadimaphalatvaka</i>	<i>Punica granatum</i> Linn.	p.	1 part
21.	<i>Vella (Vidanga)</i>	<i>Embelia ribes</i> Burm.F.	Fruit (Fr.)	1 part
22.	<i>Talisapatra</i>	<i>Abies webbiana</i> Lindl.	Leaf (Lf.)	1 part
23.	<i>Ela (Suksmaila)</i>	<i>Ellateria cardamomum</i> Maton.	Sd.	1 part
24.	<i>Malatimukula (Jati)</i>	<i>Jasminum officinale</i> Linn.	Flower (Fl.)	1 part
25.	<i>Utpala</i>	<i>Nymphaea stellata</i> Wild.	Fl.	1 part
26.	<i>Danti</i>	<i>Baliospermum monatanum</i> Muell.	Rt.	1 part
27.	<i>Padmaka</i>	<i>Prunus cerasoides</i> D.Don.	Ht.Wd	1 part
28.	<i>Hima (Rakta chandan)</i>	<i>Pterocarpus santalinus</i> Linn.F.	Ht.Wd	1 part
29.	<i>Sarpi (GoGhrita)</i>	Clarified butter from cow's milk	-	64 part

30	Water	4 times of <i>GoGhrita</i>	-	256part
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Table 3 Guidelines for *Kwatha* preparation depending on the nature of drugs²⁴-

Drugs of different	Water Ratio	Reduced up to
Soft drugs	4 times	1/4 th part
Medium and hard drugs	8 times	1/4 th part
Very hard drugs	16 times	1/4 th part

Table 4 Guidelines for *Kwatha* preparation depending on quantity of drugs²⁵-

Drug Quantity	Ratio of water
1 <i>Karsha</i> (12gm) to 1 <i>Pala</i> (48gm)	16 times
1 <i>Pala</i> (48gm) to 1 <i>Kudava</i> (192gm)	8 times
1 <i>Kudava</i> (192gm) to <i>Prastha</i> (768gm) and above	4 times

Specific rules of *Sneha* preparation²⁶:

Table 5 Rule1: The quantity of *Kalka dravya* differs from general ratio depending on different *Drava-dravya* used.

<i>Drava-dravya</i>	Quantity of <i>Kalka dravya</i>
<i>Ambu (jala)</i>	1/4 th
<i>Kwatha</i>	1/6 th
<i>Rasa (Swarasa)</i>	1/8 th

Table no. 6:Rule 2: In the case of *Godugdha* and some other *Drava-dravyas* quantity of *Kalka dravya* are as follows-

<i>Drava-dravya</i>	Quantity of <i>Kalka dravya</i>
<i>Godugdha</i> (milk)	1/8 th
<i>Dadhi</i> (curd)	1/8 th
<i>Mansarasa</i> (meat soup)	1/8 th
<i>Takra</i> (buttermilk)	1/8 th

For appropriate *Paka* of *Sneha* four times of water is also added.

Rule 3:If number of *Drava dravya* is five or more than five in number then the quantity of each should be equal to that of *Sneha* and if they are less than five then the total quantity of all of them should be four times to that of *Sneha*.

Rule 4: If only *dravya* are mentioned for a *Sneha* preparation, then *Kalka* of the same drugs is prepared and four times of water is also added.

Rule 5: If only *kwatha dravya* are given in a *Sneha Paka* then *Kalka* of same drugs is added.

Rule 6: In case where *Kalka* is either not indicated or restricted in any *Sneha Kalpana* there *Sneha* may be prepared with four times of *drava dravya*²⁷.

Rule 7: In case of *Pushpa Kalka* in the preparation, it should be taken in 1/8th part to that of *Sneha* and water should be taken four times from the *Sneha*²⁸.

Type of *Sneha Paka*:

Sneha Paka can be done in two methods²⁹.

1. *Agni Paka* (with fire)
2. *Aditya Paka / Bhanu Paka / Surya Paka* (with sun rays)

1. Agni Paka: This *Paka* method is done, using fire as a heat source. It is a commonly followed method as usually all the *Sneha* preparations are manufactured by using *Agni*. Here the *siddhi Lakshanas* (Test of perfectness) is obtained as the *Sneha* is getting prepared such as *Kalka* attains wick shape when rolled between fingers, no sound is produced when put into fire, foam disappears in *Ghrita Paka* and appears in *Taila Paka* and colour taste & odour of ingredients used is appreciated in the final product.

2. Aditya Paka: This *Paka* method is done, using sun rays. In this the *Sneha* along with *Kalka dravyas* are kept in sun rays for certain duration of time. Sometimes *Drava dravyas* may also be added along with *Kalka dravyas*. As such there are no specific *Siddhi lakshanas* are mentioned, but few opine that colour of *patra* (vessel) should change after the proper *Paka*. Drugs having more volatile principles and *Rasa dravyas* are commonly used in this method of *Paka*.

Table 7 Different types of *SnehaPakas* are mentioned in Classical Ayurvedic texts-

Reference	Types of <i>Pakas</i>
<i>Ch.S.Kalpa (12/102), Su.S.Chi. (31/11)</i>	<i>Mridu, Madhayam, Khara</i>
<i>Sh.S.Ma Kha. (9/14)</i>	<ul style="list-style-type: none"> • <i>Mridu, Madhayam, Khara</i> • <i>Ama, Mridu, Madhyama, Khara, Dagdha</i>
<i>A.S. Kalpa (8/30), A.H.Kalpa (6/19)</i>	<i>Manda, Chikkna, Kharachikkana</i>
<i>H.S.Chaturtha Sthana (2/1)</i>	<i>Khara, Chikkana, Madhyama, Vishoshi</i>

Lakshana of different *Sneha Paka*:

Ama Paka: *Ama* means the medicated oil has not sufficiently assimilated the medicinal properties due to short duration of heat treatment. A small quantity of *Kalka* taken out and pressed in between the fingers indicates water in both oil as well as in *Kalka*. Here the fluids are at heterogeneous stage. In this *Sneha* will be guru in nature with no potency generated in it. It causes *Agnimandya* and is therapeutically not used³⁰.

Mridu Paka: In this *Paka* the paste is sticky on touch due to the presence of

traces of water and produces crackling sound, when kept on fire. The oil collected at this stage is likely to contain fewer amounts of fat soluble active principles. In this *Paka Sneha Kalka* will have some amount of moisture left out in it³¹. According to *Acharya Sushruta* when the medicine only separates from the *Sneha* is said to be the *Mridu Paka*³².

- When the final product is similar to the paste of drugs it is known as *Mridu Paka*³³.

Madhyama Paka: When the paste still remains soft and not sticky due to the

complete disappearance of water content. *Kalka* can be made into *varti* between the fingers, and the oil is also free from water content. The oil collected at this stage is likely to be rich in fat soluble contents. In this *Paka Sneha Kalka* will be soft and will be devoid of moisture³⁴.

- When medicine becomes dried like wax and becomes non-sticky, it is called *Madhyama Paka*³².
 - In *Madhyama Paka* the final product is like *Sanyava* and does not adhere to ladle³⁵.
 - In this *Paka* foam appears in the surface of *Taila*³⁶.
- Khara Paka:** In this stage, the paste becomes hard, rough due to excess heating. The oil collected at this stage is meant for external application. In this *Paka Sneha Kalka* will be hard to touch³⁴.
- When the *Kalka* becomes black settle down, becomes partially dried and smooth³².
 - When final products disintegrate during wicking it is known as *Khara Paka*³⁵. (Ch.S.kalpa12/103)

- When the colour of *Taila* became *ManjishthaVarna*³⁷.

Dagdha Paka: This is the last stage of *SnehaPaka*, where probably the contents of the oil are burnt leaving it no use for any therapeutic purposes. It causes burning sensation and it is *Vata vardhaka*. In this *Paka Sneha* causes *Daha* and it is therapeutically unfit as all its potency is burnt³⁴.

Manda Paka: In this *Paka* the nature of *Kalka* will not change its look like *Kalka* (soft in nature)³⁸

Chikkana Paka:

- In this *Paka Kalka* will be *Madnopamam* (Like wax)³⁸
- In this *Paka* foam appears as white as moon (*Saphenachandrabho*)³⁹

Khara Chikkana Paka: In this *Paka Kalka* will be hard in touch³⁸

VishoshiPaka: In this *Paka* the *taila* is burnt thereby giving rise to smoke and its taste and smell are reduced because of burnt⁴⁰.

Table 8 Therapeutic uses of different *SnehaPaka* according to classical Ayurvedic texts^{41,32,42,43}.

S.n.	Paka	Ch. S.	Su. S.	A.H.	Sha. S.
1.	<i>Ama Paka</i>	-	-	-	No therapeutic use
2.	<i>Mridu Paka</i>	<i>Nasya</i>	<i>Pana, Bhojna</i>	-	<i>Nasya</i>
3.	<i>Madhayam Paka</i>	<i>Pana, Basti</i>	<i>Nasya, Abhyanga</i>	-	<i>All purpose</i>
4.	<i>Khara Paka</i>	<i>Abhyanga</i>	<i>Basti, Karnapurana</i>	-	<i>Abhyanga</i>
5.	<i>Manda Paka</i>	-	-	<i>Nasya</i>	-
6.	<i>Chikkana Paka</i>	-	-	<i>Pana, Basti</i>	-
7.	<i>Khara-chikkana Paka</i>	-	-	<i>Abhyanga</i>	-

Gandha Paka (Patra Paka)⁴⁴:

The process in which the *Sneha* is flavored by certain selected *Gandha dravya*. The fine *Kalka* of such drugs are placed in the vessel into which the warm prepared *Sneha* is filtered. After some time when the *Sneha* is cooled, it is filtered and packed into suitable containers.

Gandha dravya ratio⁴⁵:

The 1/8th quantity of *Kalka* of *Gandha dravya* will added to the total quantity of oil. However, some physicians are suggested that, the *gandha dravya Kalka* should be added equal to that of *Sneha Kalka dravya* i.e. 1/4th quantity of that of *Taila*.

Time duration to cook Sneha and some other preparations⁴⁶:

Table 10 *Sneha siddhi Lakshana*⁴⁹

1. वर्तित्वत् स्नेहकल्क	<i>Sneha Kalka</i> attains perfect wick like shape when rolled between thumb and index finger
2. स्याद्यदांगुल्या विमर्दितः	If a part of <i>Sneha Kalka</i> is put in the fire, no sound is produced indicating the loss of moisture in it.
3. फेनोद्गमस्तैले फेनशान्तिश्च सर्षिषि	Foam appears in <i>Taila Paka</i> and it disappears in <i>Ghrita Paka</i> during completion of preparation.
4. गंधवर्णरसोत्पत्तिः	Desired colour, odour and taste of the ingredients become appreciable as the preparation is properly done

Sneha

Kalpna Saviryatavadhi (Shelf life/Stability):

Shelf life is the period of time, from the date of manufacture, that a drug product is expected to remain within its approved product specification while stored under defined condition. The phrase “shelf life” and “expiry date” is often interchangeably

The *Ghrita, Taila, Guda* and such other preparations should not be cooked in single day. If done so they may not acquire the desired therapeutic properties. Instead, the process has to be carried out for more than a day by cooking at day time and allowing the *Paka* to cool down at night. By doing so, the preparation is known to acquire special therapeutic properties. **Table 9** Specific time duration for *Sneha-Paka*⁴⁷⁻

<i>Drava-dravya</i>	Time Duration
<i>Dhanya, Mansarasa</i>	1day
Milk	2days
<i>Swarasa</i>	3days
<i>Takra, Dadhi, Kanji, Gomutra</i>	5days
<i>Roots, Creepers, Climbers</i>	12days

In any pharmaceutical process where different plant material of varied hardness and fibre content are used the time taken to extract the active principles is also different⁴⁸.

used in the industry, as both terms reflect the same concept; there is a period of time where a product is stable and safe for use, but is made limited based on thorough stability research. Shelf life / expiry dates reflect the time where a product will work both safely and effectively. This is why “shelf life testing” is also referred to as

“stability testing”. The amount of time a product can stay stable under certain environmental conditions, equates to its shelf life⁵⁰.

- Sixteen months is the shelf life of any *Sneha Kalpana* (Medicated *Ghrita* or Oil) Few books mention the *Sneha Kalpana Saviryatavadhi* as four months, however this cannot be agreed as *Sharangdhara* clearly mentions the *Saviryatavdhi* as sixteen months and *Adhamala* clarifies the same even in *Gudartha dipika* commentary⁵¹.

- *Ghrita* -2 years, *Taila*-3 Years (Gazette notification GSR No. 789(E) dated 12th August, 2016 for revising shelf life of ASU Drugs)

***Sneha Avartana*⁵²:**

Avartana literally means repetition. *Sneha* which is subjected for repeated processing (*Paka*) along with *Kalka dravya* and *Drava dravya* is called *Avartita Sneha*. This concept of *Sneha Avartana* prevails from *Samhita* period. *Dasa Paki (Anutaila)*, *Shata Paki (Kshirabala taila)* and *Shahastra Paki* indicate the number of times the process is repeated. With repetition of process each time, practically we find considerable loss in the quantity of *Sneha*. But the dosage of *Avartita Sneha* is greatly reduced as it has more active principles in concentrated form.

The advantages of *Avartita Sneha* are:

- The reduced dosage
- Quicker action
- Almost therapeutic efficacy
- Easier drug administration because of lesser dose requirement.

Disadvantages of *Avartita Sneha*-

- Include more cost effectiveness
- Time factor for preparation
- More fuel and
- Manual labour.

Modern concept of *Ghrita*⁵³-

Ghrita contains approximately 8% lower saturated fatty acids which makes it easily digestible. These are the most edible fat and which are not found in any other edible oil or fat. It contains vitamins, A, D, E and K in which vita A and Vita E are anti - oxidants and are helpful in preventing oxidative injury to the body. No other edible fat or oil contains Vita. A, except fish oil. Vit. A, Keeps epithelial tissues of the body intact keeps the outer living of the eyeball moist and prevent blindness. *Ghrita* also contains 4-5% linoleic acid as Essential fatty acids promote proper growth of human body. During preparation of *Ghrita* protein casein is removed. Animal studies have shown that casein elevates cholesterol, *Ghrita* resist the spoilage by micro-organism or chemical action. The melting point of *Ghrita* is 35^o c. Which is

less than the normal temperature of the human body its digestibility coefficient or rate of absorption is 96% which is highest of all oils and fats. Since active ingredients are mixed with *Ghrita* they are easily digested and absorbed. Lipophilic action of *Ghrita* facilitates transportation to a target organ and final delivery, inside the cells, because cell membrane also contains lipid. This lipophilic action of *Ghrita* facilitates entry of the formulation into the cell and its delivery to the mitochondria microsome and nuclear membrane.

DISCUSSION

Sneha Kalpana is a pharmaceutical process to prepare oleaginous medicaments (medicated *Taila* and *Ghrita*) from the substances like *Kalka* (herbal paste), *Kwatha* (decoction) or *Drava dravya* (any other liquid such as milk, self-expressed juices, meat juice, etc.) taken in specific proportion and by subjecting them to unique heating pattern and duration to fulfil certain pharmaceutical parameters, according to the need of therapeutics. *Ghrita Kalpana* (medicated *Ghrita* preparations) is one of the commonly used dosage form in *Ayurvedic* pharmaceuticals, aimed; to extract the lipid soluble active principles from the plants and minerals, to make use of therapeutic values of *Ghrita*,

to preserve the drug/drugs for longer time (enhanced shelf life), and to enhance and hasten the absorption of drugs, when used topically in fatty medias. Before starting the *Sneha Kalpana*, remove the *Ama dosa* by the process of *Murchana*. *Sneha Murchana* is the procedure where in the raw *Sneha* (*Oil* or *Ghrita*) is boiled with the coarse powder of selected medicinal drug and desired quantity of water to get rid of *Ama* and *Gandha dos a* present in it. *Kalyanaka Ghrita* is a famous and commonly used *Ayurvedic* preparation in *Apasmāra* (Epilepsy); *Bhūtonmāda* (exogenous psychosis); *Bālagraha* (specific disorders of children); *Visavikara* (disorders due to poison); *Vandhyatva* (Infertility); *Moha* (Delusion); *Jvara* (fever); and *Smritidaurbalya* (weak memory) etc.

CONCLUSION

Sneha Kalpana is the preparation prepared by using one part of *Kalka dravyas*, four parts of *Sneha dravyas* and sixteen parts of *Drava dravya*. The mixture is boiled in *Mandagni* until *Sneha siddhi Laksanas* are attained. In any pharmaceutical process where different plant material of varied hardness and fibre content are used the time taken to extract the active principles is also different. The *Ghrita*, *Taila*, *Guda* and such other preparations should not be

cooked in single day. If done so they may not acquire the desired therapeutic properties. Instead, the process has to be carried out for more than a day by cooking at day time and allowing the *Paka* to cool down at night. By doing so, the preparation is known to acquire special therapeutic properties. General rule of *Sneha Paka* is *Dhanya*, *Mansarasa* in one day, Milk two day, *Swarasa* 3days, *Takra*, *Dadhi*, *Kanji*, *Gomutra* five days and *Roots*, *Creepers*, *Climbers* in twelve days. *Kalyanaka Ghrita* was mentioned in many classical texts and many therapeutic books in the reference of different diseases but here the importance of *Kalyanaka Ghrita* was given in reference to anticonvulsant activity i.e epilepsy (*Apasmara*). Mainly *Tikta Rasa*, *Laghu Guna*, *Ushna Virya*, and *Katu Vipaka* dravyas are used in this problem. It is proved that when herbs are processed with *Ghrita*, their activity and efficacy are potentiated and longer preservatively and itself one type of *Rasayana*.

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