

A critical conceptual review on Sarshap taila murchana w.s.r to quality control parameters increasing the stability of oil.

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Introduction

Since ancient times, *Sneha Kalpana*, a popular dose form, has been utilized to cure a variety of illnesses. *Ghrita*, *Taila*, *Vasa*, and *Majja* are all part of *Sneha*. Of these, many recipes primarily use *Ghrita* and *Taila*. *Sneha Kalpana*'s unique pharmaceutical procedure involves extracting the active elements from liquid media (milk, curd, herbal medication decoction, and juice), *Kalka* (paste of medicated *Dravya*), and oleaginous substances (*Sneha* like *Ghrita*, *Taila*, *Vasa*, and *Majja*). *Sneha* must be heated until the predetermined endpoint criteria are attained. Before *Sneha Paka*, a technique called *Sneha Murchchhana* was developed. The first mention of *Sneha Murchchhana* was in the *Gudhartha Deepika* commentary of *Sharangdhara Samhita* regarding *Taila Shodhana*.

Bhaishajya Ratnavali (19th Century) contained allusions to *Tila Taila Murchchhana*, *Katu Taila Murchchhana*, and *Eranda Taila Murchchhana* independently. *Ghrita Murchchhana* was first mentioned in *Bhaishajya Ratnavali* as well. The goal of the technique is to obtain a decent color and odor while eliminating the disagreeable odor of *Gandhadosh* from *Tila Taila* (sesame oil).¹ It is done to extract *Amadosha* (Rancidity) from *Ghrita* and *Katu Taila* (mustard oil). Through this technique, *Sneha* gains certain medicinal properties. Since the 16th century, *Sneha Murchchhana* has been mentioned in several *Ayurvedic* writings. This was probably caused by the fact that *Acharyas* used to make medicine, especially for their patients. Other references are also found in the commentary of *Sharangadhara Samhitha* by *Kashirams Gudarthadipika*,² *Bruhat Yoga Tarantini*,³ *Bharat Bhaishajya Ratnakar*,⁴ *NavaparibhasaPradeep*,⁵ also mentioned the process and importance of *Sneha Murchhana*.

Method of preparation of Taila Murchana⁶

Taila is heated until it gets froth-free and allowed for self-cool. Later mentioned *Murchana* drugs are added to *Taila* and *Paaka* is done till it gets free from moisture.

Herb	Botanical name	Part used	Quantity
<i>Amalaki</i>	<i>Euphorbia officinalis</i>	Pericarp	2 Karsha
<i>Haridra</i>	<i>Curcuma longa</i>	Rhizome	2 Karsha
<i>Musta</i>	<i>Cyprus rotendus</i>	Rhizome	2 Karsha
<i>Bilva</i>	<i>Aegel marmelose</i>	Fruit	2 Karsha
<i>Dadima</i>	<i>Punica granatum</i>	Fruit	2 Karsha
<i>Nagakeshara</i>	<i>Mesua Ferra</i>	Stamens	2 Karsha
<i>Krishna Jeeraka</i>	<i>Veronia anthelmentica</i>	Fruit	2 Karsha
<i>Ushira</i>	<i>Vettivera zizynoidis</i>	Whole plant	2 Karsha
<i>Nalika</i>	<i>Cinnamomum zeylanicum</i>	Bark	2 Karsha
<i>Vibhitaki</i>	<i>Terminalia chebula</i>	Pericarp	2 Karsha
<i>Manjishtha</i>	<i>Rubia cordifolia</i>	stem	2 Pala
<i>Sarshapa Taila</i>	<i>Brassica compestris</i>	Seed oil	1 Prasta
Water			1 Adhaka

Procedure

Heat the *Katu Taila (Sarshapa)* till it becomes free from froth. Add 1 *Aadhaka* of water along with powder of 1-11 drugs. Boil it on moderate heat till the *Taila* becomes free from water. Filter it and use it for the preparation of other medicated oils.

Analytical Study

The parameters represented are as follows.

- a) **Specific Gravity:** The specific gravity of a liquid is the weight of a given volume of a liquid at 25 degrees (unless otherwise specified) compared to the weight of an equal volume of water at the same temperature, all weighing being taken in air.⁷
- b) **Acid value:** The acid value is the number of mg of Potassium hydroxide required to neutralize the free acids in 1 gm substance.⁸
- c) **Refractive index / Index of Refraction:** The refractive index (n) of a substance with reference air is the ratio of the sine of the angle of incidence to the sine of the angle of refraction of a beam of light passing from air into the substance.⁹ For detecting the RI value, a Refractometer was used.
- d) **Saponification value:** Saponification value is the number of mg of Potassium hydroxide required to neutralize the fatty acids, resulting from the complete hydrolysis of 1 gm of the oil or fat.¹⁰
- e) **Moisture content:** A small amount of a liquid (such as water) that makes something wet or moist.¹¹
- f) **Iodine value:** The Iodine value of a substance is the weight of iodine absorbed by 100 parts by weight of the substance (oil or fat).¹²

Discussion

Because of the free acids that are present, the acid value serves as a gauge of oxidation in fats and oils. The oxidative process of the fatty acids should be reversed more effectively by the class of medications used to treat *Murchana*. Oil becomes more rancid due to the moisture content.¹³ *Murchana* is therefore unquestionably helpful in determining the rancidity of *Taila*. *Murchana* may serve as a refining mechanism, extending the shelf life of raw fats and oils. The average molecular weight of fatty acids is shown by the saponification value. The weight of fatty acids decreases with increasing saponification value.¹⁴

The degree of unsaturation in oil is indicated by the iodine value¹⁵ which in turn represents the oxidative mechanism. It indicates the amount of unsaturated fats. Since fats and oils with unsaturated fatty acids are advised for culinary uses, an increase in iodine value improves the edible quality of these substances. Therefore, such *Murchita Sneha* could be useful for *Snehapana*-related objectives. *Murchana* is therefore able to change the saturation of fats and oils without affecting their stability.

Conclusion

The goal of the current study was to emphasize the significance of the *Murchana* process before the use of any raw fats or oils for therapeutic purposes. *Murchana* is recommended for raw fats and oils in *Ayurvedic* pharmaceuticals to improve shelf life. They ought to be shielded from the oxidation process. The pace at which fats and oils go rancid is accelerated by their moisture level. *Murchana* therefore aids in achieving and preserving the ideal physico-chemical characteristics of *Sneha Dravya*. Animal and vegetable fats and oils that are taken raw from their source are essentially to be processed. It is clear from the review that *Sneha Murchana* is a necessary first step. The herbal medication used in *Murchana* may improve the chemical stability of oils by acting as an antioxidant. Given the significant therapeutic relevance of *Murchana Dravyas*, it may be inferred that the medicated oil will ultimately have greater therapeutic efficacy than oil made without *Murchana*. Given

the current state of globalization and the desire for improved treatment efficacy, the *Murchana* procedure is extremely important. Therefore, the *Murchana* process must be a precondition for all medicinal oil products.

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