



Review Article

A COMPREHENSIVE REVIEW ON KUMKUMADI THAILA

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ABSTRACT

Kumkumadi Thaila is a popular classical *Sneha* preparation indicated for external as well for *Nasya* purpose. It is mentioned in *Kshudra Roga chikitsa* but on general practice used for cosmetic purposes especially for hyperpigmentation. Cosmetics are mixtures of chemical compounds derived from either natural sources or synthetically created ones used to cleanse or protect body or skin. Hyperpigmentation is a condition in which skin patches became darker in colour than normal. Present study aimed to compile the available classical references regarding the ingredients of *Kumkumadi Thaila* to evaluate their similarity and differences. Total 14 drugs including *Ajaksheera* are the ingredients of this formulation based on reference of *Ashtanga Hridayam*. *Kumkuma*, *Yashti Madhu* and *Thila Thailam* are common ingredients in all reviewed *Yogas*. Generally, *Kumkumadi Thaila* is a purely herbal formulation. Some references contain the mineral drugs such as *Gairika* (Red Ochre - Ferric oxide (Fe₂O₃)) and *Manashila* (Arsenic disulphide (As₂S₃)) as ingredients. The animal products such as *Gorochana* and *Madhucchista* are also there according to some references.

INTRODUCTION

In *Bhaishajya Kalpana*, one of the important pharmaceutical processes is *Sneha Kalpana*. It mainly targets for the extraction of water soluble and fat-soluble active principles of raw material and also aims for the faster drug absorption. *Kumkumadi Thaila* is a classical *Sneha* preparation indicated for external as well for *Nasya* purpose. It is a popular and effective *Thaila Kalpana* widely used in cosmetic preparations. Most pharmacies manufacture *Kumkumadi Thaila*, but the authentic review about the classical references is not available currently. Hence it is a need to compile the classical references available in various texts of Ayurveda. While searching about the works regarding *Kumkumadi Thaila*, only a few of them are present, but there is no research paper regarding the references in *Ashtanga Hridaya* [1] which is taken as the source for *Kumkumadi Thaila* by various pharmaceutical companies especially in Kerala. Two clinical studies of *Kumkumadi Thaila* are available. Those are the *Vyangahara* effect and efficacy of *Kumkumadi Thailam*

in discoloration of lips due to smoking. *Ashtanga Hridaya* quoted *Kumkumadi Thaila* for the first time. Many texts mentions this *Thaila* including *Bhavaprakasha* [2], *Yoga Ratnakara* [3], *Chakradatta* [4] etc. Generally, it is mentioned in the context of *Kshudraroga chikitsa*. In Ayurveda, *Kshudra Roga* means "minor skin diseases", but it has immense significance in cosmetic scenario. This *Thaila* is widely used as cream and base of soap also. It is very effective in managing dry skin, increases suppleness, improves complexion and skin texture, removes blemishes, tanning of skin and manages uneven skin tone. It is an ideal solution for lighten dark circles also. The present study aimed to compile and analyse critically about different available classical references regarding the ingredients along with their similarities and differences. Here, the review is done on different references due regard to their market availability.

MATERIALS AND METHODS

The following text books of Ayurveda were referred for undertaking critical analysis of.

1. *Ashtanga Hridaya*
2. *Chakradatta*
3. *Yogaratanakara*
4. *Bhavaprakasha*
5. *Bhaishajya Ratnavali*
6. AFI Part 1

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7. *Gadanigraha*.

The constituents of *Kumkumadi Thaila* as per different authors:

1. *Ashtanga Hridaya*

Kumkumadi Thaila [1]: *Kumkumadi Thaila* is described in *Kshudra Roga Prathishedha* of *Uthara stana*. The list of ingredients of this formulation are listed in Table 1, Table 2, Table 3 and Table 4.

Table 1: *Kashaya Dravyas*

S.No	Ingredient	Botanical Name	Parts used	Quantity
1.	<i>Kumkuma</i>	<i>Crocus sativus</i>	Stigma	1 Pala
2.	<i>Usira</i>	<i>Vetiveria zizanioides</i>	Root	1 Pala
3.	<i>Kaleya</i>	<i>Santhalum album (sub)</i>	Heart wood	1 Pala
4.	<i>Laksha</i>	<i>Laccifer lacca</i>	Resin	1 Pala
5.	<i>Yashtyahwa</i>	<i>Glycyrrhiza glabra</i>	Root	1 Pala
6.	<i>Chandanam</i>	<i>Santhalum album</i>	Heart wood	1 Pala
7.	<i>Nyagrodha</i>	<i>Ficus bengalensis</i>	Tender aerial roots	1 Pala
8.	<i>Padmaka</i>	<i>Prunus ceresoides</i>	Heart wood	1 Pala
9.	<i>Padmakesara</i>	<i>Nelumbo nucifera</i>	Stigma	1 Pala
10.	<i>Neelolpala</i>	<i>Monochoria vaginalis</i>	Stigma	1 Pala
11.	<i>Manjishta</i>	<i>Rubia cordifolia</i>	Root	1 Pala
12.	<i>Jala (water)</i>	-	-	1 Adhaka

Table 2: *Kalka Dravyas*

S.No	Ingredient	Botanical Name	Part used	Quantity
1	<i>Laksha</i>	<i>Laccifer lacca</i>	Resin	1 Karsha
2	<i>Pattanga</i>	<i>Caesalpinia sappan</i>	Heart wood	1 Karsha
3	<i>Manjishta</i>	<i>Rubia cordifolia</i>	Root	1 Karsha
4	<i>Yashtimaduka</i>	<i>Glycyrrhiza glabra</i>	Root	1 Karsha
5	<i>Kumkuma</i>	<i>Crocus sativus</i>	Stigma	1 Karsha

Table 3: *Drava Dravya*

S.No	Ingredient	Source	Quantity
1.	<i>Aja ksheera</i>	Goat's milk	2 Kudava

Table 4: *Sneha Dravya*

S.No	Ingredient	Bot. source	Quantity
1.	<i>Thila Thailam</i>	<i>Seasamum indicum</i>	1 Kuduva

Method of Preparation

There are usually 3 essential components in the manufacture of *Thaila Kalpana*.

1. *Kalka Dravya* – 1 Karsha each of *Laksha*, *Pattanga*, *Manjishta*, *Yastimadhuka*, *Kumkuma* were finely powdered and made into *Kalka* with sufficient amount of water.
2. *Sneha Dravya* – 1 Kudava of *Thila Thaila*
3. *Drava Dravya* –
 - (a) *Kashaya* - 1 Pala each of *Kumkuma*, *Usira*, *Kaleeya*, *Laksha*, *Yashtyahwa*, *Nyagrodha*, *Padmaka*, *Padmakesara*, *Neelolpala*, *Manjishta* were made into coarse powder and made into *Kashaya* by

adding 1 *Adhaka* of water. Heating should be done in mild fire till the decoction gets reduced $\frac{1}{4}$ th. Then it was filtered through a clean four folded cloth to a beaker.

- (b) *Aja Ksheeram* – 2 Kudava, double the quantity of *Thila Thaila*.

Main procedure: A wide mouthed vessel was heated in mild fire. *Thila Thaila* was poured into it. Then *Kalka* was mixed thoroughly with the *Kashaya*. This *Kashaya* was then slowly poured into the *Thaila*. Mild fire should be maintained throughout the procedure. When the *Kalka* attains *Mridu paka* consistency, slowly add 2

Kudava of *Ajaksheera* and heating was continued. After some time, fire was put off. On the next day, heating was continued till the *Kalka* attains *Mridu paka* (*Lakshana*: *Kalka* contain slight moisture content, it sticks to the finger and could not be made into *Varthi* form)/*Madhyama paka* (*Lakshana*: *Kalka* becomes free from moisture content its consistency is soft and smooth. It would not stick to *Darvi* and could be made into rolls) based upon the mode of use. Then the vessel was removed from fire and the content was filtered through a clean dry four- folded cloth and stored in a clean dry airtight glass container devoid of moisture.

Mode of Administration: *Nasya*

Shelf-Life: 1 year and 4 months (Classical), 3 Years (According to D & C Act)

Indications: *Nilika, Palitha, Vyanga, Vali, Tilaka, Mukhadooshika, Mukhopachaya varnakrit*, when used as *Nasyam*.

List of ingredients and indications are listed in Table 5 & Table 6 respectively.

Table 5: List of Ingredients as per Different References

S.No	Ingredient	AH	B.P, Y.R, AFI	CD Yoga 1, BR Yoga 1	CD Yoga 2	CD yoga 3, BR Yoga 2	Gadanigraha
1	<i>Kumkuma</i>	✓	✓	✓	✓	✓	✓
2	<i>Useera</i>	✓	✓	✓	-	-	✓
3	<i>Kaleeya</i>	✓	✓	✓	-	✓	✓
4	<i>Laksha</i>	✓	✓	✓	✓	✓	-
5	<i>Yashtyahwa</i>	✓	✓	✓	✓	✓	✓
6	<i>Chandanam</i>	✓	✓	✓	✓	-	✓
7	<i>Nyagroda</i>	✓	✓	✓	-	-	-
8	<i>Padmaka</i>	✓	✓	✓	-	-	-
9	<i>Padmakesara</i>	✓	✓	✓	-	✓	✓
10	<i>NeelolPala</i>	✓	-	✓	-	✓	✓
11	<i>Manjishta</i>	✓✓	✓	✓	-	✓	✓
12	<i>Pattanga</i>	✓	✓	✓	-	-	✓
13	<i>Ajaksheera</i>	✓	-	✓	✓	-	-
14	<i>Thailam</i>	✓	✓	✓	✓	✓	-
15	<i>Lodhra</i>	-	✓	-	-	-	✓
16	<i>Raktachandana</i>	-	✓	-	-	✓	✓
17	<i>Patraka</i>	-	✓	-	-	-	✓
18	<i>Kushta</i>	-	✓	-	-	-	-
19	<i>Gorochana</i>	-	✓	-	-	✓	✓
20	<i>Haridra</i>	-	✓	-	-	✓	✓
21	<i>Daruharidra</i>	-	✓	-	-	✓	✓
22	<i>Gairikam</i>	-	✓	-	-	-	✓
23	<i>Nagakesara</i>	-	✓	-	-	-	✓
24	<i>Palasakusuma</i>	-	✓	-	-	-	-
25	<i>Priyangu</i>	-	✓	-	-	✓	-
26	<i>Malati</i>	-	✓	-	-	-	-
27	<i>Madhucchishta</i>	-	✓	-	-	-	-
28	<i>Sarshapa</i>	-	✓	-	-	-	-

2. *Bhavaprakasha* [2], *Yoga Ratnakara* [3] and *AFI* [5]

Kumkumadi Thaila is described in *Bhavaprakasha Madhyama Khandam Kshudra Rogadhikara, Yogaratnakara Kshudra Rogadhikara, AFI Part 1 – Thaila prakarana*.

3. *Chakradutta* [4], *Bhaishajya Ratnavali* [6]

Three variations of *Kumkumadi Thaila* are described in *Chakradutta*. They are *Kumkumadi Thaila, Panchanga Kumkumadi Thaila* and *Saptatrimisanga Thaila*. *Bhaishajya Ratnavali* included the same two *Yogas* of *Chakradutta*, and excluded *Panchanga Kumkuma Thailam* in *Kshudra Roga Adhikara*.

4. *Gadanigraha* [7]

Kumkumadi Thaila is described in *Prayoga Khanda Thaila Adhikara*.

29	Surabhi Vacha	-	✓	-	-	-	-
30	Goksheera	-	✓	-	-	✓	-
31	Plaksha Sunga	-	✓	-	-	-	-
32	Kimsuka	-	-	-	-	✓	-
33	Mathulanga Kesara	-	-	-	-	✓	-
34	Kusumba	-	-	-	-	✓	-
35	Madayanti	-	-	-	-	✓	-
36	Manashila	-	-	-	-	✓	-
37	Kakolyadi Gana	-	-	-	-	✓	-
38	Dwipanchamoola	-	-	✓	-	✓	-
39	Shariba	-	-	-	-	-	✓
40	Swarnaksheeri	-	-	-	-	-	✓
41	Thaleesapatra	-	-	-	-	-	✓

OBSERVATIONS

Kumkuma, *Yashtimadhu* and *Thila Thailam* are common ingredients in all reviewed *yogas*. *Laksha*, *Chandana*, *Padmaka*, *Padmakesara* and *Manjishta* are present in almost all references. *Gadanigraha* excluded the addition of *Ksheera* and *Laksha*, whereas all other authors specifically mentioned it. *Yoga* of AFI, *Yoga* 1 of *Bhaishajya Ratnavali* and *Yoga* 1 of *Chakradutta* contains *Kumkuma*, *Madhuka*, *Lodhra*, *Gairika* and *Priyangu* in common. *Dasamoola* is added as an ingredient in first *Yoga* of *Chakradatta* and *Bhaishajya Ratnavali*. Some authors specifically mentioned *Drava dravya* as *Ajaksheera* where some are mentioned it as “*Ksheera*” only. Generally, *Kumkumadi Thaila* is a purely herbal formulation. But the *yoga* mentioned in *Bhavaprakasha*, *Yoga Ratnakara*, *Gadanigraha* and AFI contains mineral ingredient *Gairika* (Red Ochre – Ferric oxide (Fe₂O₃)). The 3rd *yoga* of *Chakradutta* and 2nd *yoga* of *Bhaishajya Ratnavali* contain another mineral drug, *Manashila* as an ingredient. The animal products such as *Gorochana* and *Madhucchista* are also there according to some references. Addition of *Maddhucchista* is exclusively by mentioned by *Bhavaprakasa*, *Yoga Ratnakara* and AFI.

Table 6: List of Indications as per different references

S. No	References	Indications
1.	<i>Bhavaprakasa</i> <i>Yogaratanakara</i> AFI	<i>Vyanga</i> , <i>Neelika</i> , <i>Tilaka</i> , <i>Mashaka</i> , <i>Nyccha</i> , <i>Mukhadooshika</i> , <i>Padmini kantaka</i> , <i>Jathumani</i> , <i>Poorna chandramandala sundharam</i> .
2.	<i>Chakradutta</i>	Yoga 1: <i>Mukha Varna prasadana</i> , <i>Neelika-Pitaka</i> - <i>Vyanga Saptaratra prayogena bhaveth Kanchana Sannibham</i> Yoga 2: <i>Neelika</i> , <i>Pidaka</i> , <i>Vyanga</i> , <i>Saptaratra prayogena bhaveth Kanchana Sannibham Aswibhyam nirmitham</i> Yoga 3: <i>Abhayangath kanchanopamama Vadana</i> , <i>Pushti</i> , <i>Lavanya kanthidam</i> , <i>Saubhagya lakshmijanam</i> , <i>Vaseekaranam utthamam</i>
3.	<i>Bhaishajya</i> <i>Ratnavali</i>	Yoga 1: <i>Mukha Varna prasadana</i> , <i>Neelika-Pitaka</i> - <i>Vyanga Saptaratra prayogena bhaveth Kanchana Sannibham</i> , <i>Aswibhyam nirmitham pura</i> Yoga 2: <i>Abhayangath kanchanopamama Vadana</i> , <i>Pushti</i> , <i>Lavanya kanthidam</i> , <i>Saubhagya lakshmijanam</i> , <i>Vaseekaranam utthamam</i>
4.	<i>Gadanigraha</i>	<i>Tilaka</i> , <i>Pitaka</i> , <i>Vyanga</i> , <i>Neelika</i> , <i>Mukhadooshika</i> , <i>Sareera Karsyam</i> , <i>dusschaya</i> and <i>vivarnahara</i> , <i>Janayeth aasuroopam cha Manoharam</i> , <i>padmakesara varnabham mukham bhavathi kanthimath</i>

DISCUSSION

Kumkumadi Thaila consists of 14 drugs including *Ajaksheera* as per the reference in *Ashtanga Hridaya*. The contents of *Kumkumadi Thaila* are *Tridosahara* especially *Kapha-Pitthahara*. The predictable mode of action of *Kumkumadi Thaila* can be understood as follows:

Rasa: While analysing the *Rasapanchaka* of *Kumkumadi Thaila*, it is predominantly *Kashaya-Tikta-Madhura Rasa*. *Kashaya rasa* is predominantly *Asra vishodana*, *Ropana*, *Twak prasadana*. *Tikta rasa* is helpful in alleviating burning sensation, itching, skin diseases and acts as a *Vishagna*. Due to its *Kashaya*

rasa, it may restore the normal pigmentation of the skin. So can be possibly indicated in pruritis, urticaria, acne vulgaris and tanning of skin. The action of *Tikta rasa* on skin shows it has anti-diaphorating and anti-pruritic effect. It also aids the firmness of *Twak* and *Mamsa*. *Madhura rasa* is considered as *Balavarnakara* and *Twacchya*. Thus it may have action in promoting complexion. It may have promising results in controlling the tanning of skin, wrinkles and ageing process. This formulation is mainly indicated in *Vyanga*, where *Pitta* vitiation is the main culprit.

Guna: *Kumkumadi Thaila* having *Laghu* and *Snigdha guna* predominantly. *Laghu guna* cleanses the *Srotas* and helps to reduce *Kleda* and *Mala*. *Snigdha guna* nurtures *Dhathus*. It increases *Bala* and endurance of body, also enhances the colour and complexion of individual. *Snigdha* and *Guru guna* of *Thaila* nourishes the *Dhathus* and improves cell regeneration. *Mardhava* and *Varna prasadana* are contributed by *Snigdha guna* whereas *Prabha*, *Prakasha*, *Varna* are the properties of *Laghu* and *Ruksha*.

Vipaka & Veerya: *Katu vipaka* is considered as *Kaphahara* and *Srothosodhaka*. This property may enhance the penetrating effect in the skin and thereby increases the absorption of oil in the skin for ensuring better radiance. Majority of ingredients in this *Thaila* are *Seetha veerya*, which are endowed with *Sonitha prasadana karma*.

- Preferred *Paka* for *Kumkumadi Thaila* is generally *Madhyama*, which ensures better shelf life than *Mridu paka*. According to *Acharya Sharangadhara Samhita*, “*Sarva Karmeshu Madhyama*”, which means for all procedures *Thaila* in *Madhyama paka* can be used.
- The anti-oxidant activity of *Kumkuma*, is mainly contributed by monoterpenoids, crocin, crocetin, kaempferol, and other phenolic compounds. The hyperpigmentation or melanin aggravation is reduced by these compounds by reducing the tyrosinase activity [8]. Saffron and its components could be considered as a promising immunoregulatory agent in immune disorder treatment. [9] Also, crocin, betacarotene and Saffranal inhibit the expression of markers of inflammation, tumour necrosing factor and interleukin. Saffron and its components could be considered as a promising immunoregulatory agent in immune disorder treatment. As a result, it aids in relieving the burning and itching sensation of lesions. On topical application of *Manjishta*, it is found to stimulate keratinocyte differentiation in mouse models and by reducing size of skin lesions and thus helps repair the damaged skin. According to Ayurvedic texts, *Yashtimadhu* is *Varnya*, and it eradicates all skin ailments. Regular application of goat’s milk helps to moisturize skin due to

presence of fatty acids and tryglycerides. It improves complexion and antibacterial effect aids for the pimple treatment. A rejuvenating glow due to exfoliation of dead cells is also added benefit of this milk, it is due to the presence of Alpha Hydroxyl Acid (AHA)[10]. Lactic acid content brightens skin.[11] When *Kumkumadi Thaila* is applied locally it dilates the blood vessels at the affected area facilitating the absorption of the active ingredient present in the medicine, which then enters the blood stream through capillaries.

- On analysing that most of the drugs of this *yoga* are included in *Dasemanis* [12] or *Ganas* of *Brithrayi* which are indicated for the skin ailments. *Chandana*, *Padmaka*, *Useera*, *Madhuka* and *Manjishta* are included in the *Varnya Dasemani* [12] whereas *Manjishta* and *Chandana* are included in *vishagna guna*. *Chandana* and *Madhuka* are included in *Kandugna Dasemani*. Along with that *Neelolpala*, *Useera* contributes in *Daha prasamana*. *Sonithastapana guna* includes *Kumkuma*, *Madhuka*. *Eladi gana* [13,14] consists of *Useera*, *Kumkuma* and *Chandana*. *Sarivadi gana*[15,16] consists of *Chandana*, *Kuchandana*, *Padmaka*, *Madhuka*, *Useera*. Both of them are generally used in skin diseases. *Anjanadi gana* [17,18] includes *Neelolpalam*, *Padmakesara* and *Madhuka*, can be indicated in skin ailments with severe burning sensation.
- *Kumkuma*, *Yashtimadhu* and *Thila Thailam* are common ingredients in all reviewed *Yogas*. *Gadanigraha* excluded the addition of *Ksheera* and *Laksha*, whereas all other authors specifically mentioned it. *Yoga* of AFI, *Yoga 1* of *Bhaishajya Ratnavali* and *Yoga 1* of *Chakradutta* contains *Kumkuma*, *Madhuka*, *Lodhra*, *Gairika* and *Priyangu* in common. Generally, *Kumkumadi Thaila* is a purely herbal formulation. But the *yoga* mentioned in *Bhavaprakasha*, *Yogaratanakara*, *Gadanigraha* and AFI contains *Gairika* (Red Ochre – Ferric oxide (Fe₂O₃)). The 3rd *yoga* of *Chakradutta* & 2nd *yoga* of *Bhaishajya Ratnavali* contain *Manashila* as an ingredient. *Gairika* is generally used as a topical agent because of its *Vishagna* property. *Manashila* has *Visha nasakaraprabhava*. The animal products such as *Gorochana* and *Madhucchista* are also there according to some references. Addition of *Maddhucchista* is exclusively by mentioned by *Bhavaprakasa*, *Yogaratanakara* and AFI. During the pharmaceutical preparation of this oil, many pharmacies add Rose water for increasing fragrance.

CONCLUSION

This article is an effort for reviewing all the available classical references of *Kumkumadi Thaila*. Total 14 drugs including *Ajaksheera* are the ingredients of this formulation based on reference of

Ashtanga Hridayam. The contents of *Kumkumadi Thaila* is *Tridosahara* especially *Kapha-Pitthahara*. *Kumkuma*, *Yashti Madhu* and *Thila Thailam* are common ingredients in all reviewed *yogas*. There are slight differences of ingredients in reviewed references. Generally, *Kumkumadi Thaila* is a purely herbal formulation. But the *yoga* mentioned in *Bhavaprakasha*, *Yoga Ratnakara*, *Gadanigraha* and *AFI* contains mineral ingredient *Gairika* (Red Ochre – Ferric oxide (Fe₂O₃)). The 3rd *yoga* of *Chakradutta* & 2nd *yoga* of *Bhaishjya Ratnavali* contains another mineral drug *Manashila* (Arsenic disulphide (As₂S₃)) as an ingredient. The animal products such as *Gorochana* and *Madhucchista* are also there according to some references.

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