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MODIFICATION OF *ANJHADADI TAILA* INTO MALAHARA FORM AND ITS GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS) ANALYSIS

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ABSTRACT

Bhaishajya Kalpana – 'Ayurvedic pharmaceutics' a branch mainly focuses on classical preparations, product design, formulation development with the innovative approach. Among all the classical preparations, *Sneha* preparations occupy major role either as external applications or internal medications. The word '*Malahara*' refers to semisolid preparations acting chiefly as local anodynes and sedatives for local application for various lesions, containing active drugs mixed with oil, ghee, beeswax, petroleum jelly etc. *Anjhadadi Taila* is an classical formulation mentioned in *Sahasrayogam* mainly indicated in *Ostarogas*, containing five drugs namely *Bhumyamalaki* (Phyllanthus amarus Webst.), *Nirgundi* (Vitex negundo Linn.), *Nimba* (Azadirachta indica A.Juss.), *Haridra* (Curcuma longa Linn.), *Tila Taila* (Sesamum indicum Linn.), which are known for their antioxidant, anti-inflammatory, anti-microbial, anti-cancer and wound healing properties. Most common symptoms of *Osta Rogas* includes cracking of lips, pain, discomfort, soreness, inflammation, tenderness, burning sensation leading to severely bleed and infected if not treated. *Malahara* has *Snehana* (oleation), *Ropana* (healing), *Lekhana* (Scrapping) and *Varnya* (beautifying) property, depending on the combination of active ingredients present in the formulation. In the present study *Anjhadadi Taila* was modified into *Malahara*, for making the product user friendly and to develop preliminary standards of the formulation, prepared *Anjhadadi Malahara* was analysed for instrumental analysis Gas

chromatography and mass spectroscopy including various other physico-chemical analysis like organoleptic characters, uniformity of content, loss of drying at 105℃, spreadability and microbial contamination.

KEYWORDS: *Anjhadadi Taila, Anjhadadi Malahara, Ostarogas,* Lips, Gas chromatography and mass spectrometry GC-MS, Physico-chemical analysis.

INTRODUCTION

Lips are an important part of the face, can be beautified and protected with the usage of the cosmetics. Lip care products are essential for day-to-day use to maintain healthy moisturized lips and prevent them from getting flaky, dry and chapped. *Anjhadadi Taila*[1] is a classical formulation mentioned in *Sahasrayogam* under *Taila Prakarana* indicated in *Osta Rogas.* According to *Acharya Yogaratnakara*, most common symptoms of *Osta Rogas*[2] includes cracking of lips, pain, discomfort, soreness, inflammation, tenderness, burning sensation leading to severely bleed and infected if not treated.

In *Malayalam* the word '*Anjhadadi*' implies *Bhumyamalaki*[3], known for its abundance of anti-inflammatory and pain-relieving characteristics in the treatment of a variety of ulcers, including ulcerative colitis, peptic ulcers, canker sores, mouth ulcers, etc. Bioactive constituents present in *Bhumyamalaki* help in cleansing, promoting tissue regeneration, also aid in minimizing wound and swelling for its astringent qualities.

When compared with the *Taila*, *Malahara* preparations are more acceptable for external applications as it is stable, non-irritant and patients convenient.

In the present study, classical formulation *Anjhadadi Taila* was modified into *Malahara* (ointment) form, *Anjhadadi Malahara* was further subjected to instrumental analysis of Gas chromatography and mass spectrometry (GC-MS) including various other physio-chemical analysis to develop the analytical profile of the product.

AIMS AND OBJECTIVES

1. To prepare *Anjhadadi Taila* as per reference of *Sahasrayogam Taila Prakarana*.
2. To modify *Anjhadadi Taila* into *Malahara* form.
3. To carry out Physico-chemical Analysis of *Anjhadadi Malahara*.

MATERIALS AND METHODS

A) PHARMACEUTICAL STUDY

B) ANALYTICAL STUDY

A) Pharmaceutical study includes

Step – 1- Preparation of *Anjhadadi Taila* as per reference in *Sahasrayogam Taila Prakarana.*

Step- 2 – Modification of *Anjhadadi Taila* into *Malahara* form.

Materials

- Materials required for the preparation of *Anjhadadi Taila* and its *Malahara* (ointment) were collected from Alva's Pharmacy Mijjar.
- Preparations of *Anjhadadi Taila* and its *Malahara* (ointment) was done in Dept of Rasashastra and Bhaishajya Kalpana, Alva's Ayurveda Medical College, Moodubidre.

Authentication of raw drug

The raw drugs were identified by the experts of Alva's ATMA Research Centre, Moodubidre, Karnataka.

Equipment's used

Khalva Yantra, Gas stove, wide mouthed stainless-steel vessel, clean kora cloth, spatula, Pyrometer etc.

Ingredients

Table No. 1: Showing formulation composition of *Anjhadadi Taila.*

	INGREDIENTS	PART USED	QUANTITY USED
***1)Kalka Dravya-* 1part**	***Haridra*** *(Curcuma longa* Linn.)	Rhizome	150 g
***2)Sneha Dravya-* 4 parts**	***Tila Taila*** *(Sesamum indicum* Linn.)	Seed	600 ml
***3) Drava Dravya-* 16 parts**	***Bhumyamalaki*** ***(****Phyllanthus amarus* Webst.)	Whole Plant	800 ml
	Nirgundi *(Vitex negundo* Linn.)	Leaves	800 ml
	Nimba ***(****Azadirachta indica* A.Juss.)	Leaves	800 ml

1) METHOD OF PREPARATION OF *ANJHADADI TAILA*

- Freshly collected drugs *Haridra, Bhumyamlaki, Nirgundi, and Nimba* were cleaned and washed properly to remove physical impurities.
- 150 g of *Haridra* was taken, pounded well in *Khalva Yantra* and *Kalka* was prepared.
- 2400 ml of *Swarasa* was extracted from freshly collected drugs *Bhumyamlaki, Nirgundi, and Nimba* by pounding in *Khalwa Yantra,* followed by filtering through clean kora cloth and kept ready.
- 600 ml of *Tila Taila* was taken in clean wide mouthed stainless-steel vessel and heated over *Mandagni.*
- When *Taila* started to boil, prepared *Kalka* was added followed by addition of *Swarasa* and whole content was boiled for 20 minutes.
- *Taila Paka* was carried out for 3 days, on the 3rd day of the preparation after the appearance of the *Taila Siddhi Lakshanas,* oil was filtered and allowed for self-cool, later stored in air tight containers.

2) MODIFICATIONS OF *ANJHADADI TAILA* INTO *MALAHARA* FORM

- Prepared 150 ml of *Anjhadadi Taila* was taken in a clean vessel and heated by double boiling method.
- 25g of beeswax was added to the heated *Taila* and stirred thoroughly until the mixture become homogeneous.
- Then the contents were filtered through clean cloth and poured into dry clean containers which was kept in the cold- water bath to facilitate self-cooling so as to attain uniform consistency and texture.
- On self-cooling containers were closed with the lid.

Packing and labelling

Prepared final product was packed, labelled and stored in clean and dry durable polypropylene (PP) squeeze tubes for easy application.

B) Analytical study

1) Evaluation of Organoleptic characters (Colour, Odour, Consistency)

2) Gas chromatography- mass spectrometry (GC-MS)

Procedure

The GC-MS column was used in the analysis using a fused silica column, packed with HP – 5 MS (5% biphenyl 95% dimethyl polysiloxane, 30 m x 0.25 mm ID x 250 µm df) and the components were separated using solvent system using methanol: Acetone – 20: 80 at the purge flow of 3.0 mL/min with split ratio 10.0; column oven temperature was set at 80℃ with the column flow of 1.50 mL/min with linear velocity of 45.1 cm/sec. The injector temperature was set at 280℃ during the chromatographic run. 1µL extract of the sample was injected into the instrument using split mode and oven temperature was maintained as follows: 80℃ (hold time – 2 min); followed by 280℃ at the rate of 10 min (hold time- 10 min); and then 330℃ at the rate of 20 min (hold time – 5 min). The mass detector conditions were: The inlet line temperature 300℃; ion source temperature 200℃. The detector gain mode was relative to the tunning result; detection gain at 0.95 kV + 0.00 kV. The spectrum of the components found were compared with the database of the spectrum of known components stored in the GC-MS NIST (2022) library.

RESULTS

A) PHARMACEUTICAL RESULTS

Table No. 2: Showing detailed results of *Anjhadadi Taila.*

Quantity of *Tila Taila*	600 ml
Quantity of *Kalka*	150 g
Quantity of *Swarasa*	2400 ml
Residue of *Kalka* after filtration	258 g
Quantity of *Anjhadadi Taila*	450 ml
Loss of *Taila* after filtration	150 ml
Loss of *Taila* in Percentage (%)	34%
Total Time Taken	3hr 7 minutes

Table No. 3: Showing organoleptic characters of *Anjhadadi Malahara.*

Organoleptic Characters	**Result**
Colour	Dark olive green
Odour	Characteristic
Consistency	Soft
Appearance	Viscous semi-solid

Table No. 4: Showing detailed results of *Anjhadadi Malahara.*

Quantity of *Anjhadadi Taila* taken	*150 ml*
Quantity of Beeswax taken	*25 g*
Quantity of *Malahara* obtained	*182 g*

Quantity of *Malahara* obtained after filtration	*164 g*
Loss of *Malahara* in percentage	*10 %*
Total time taken	*15 Minutes*

B) ANALYTICAL RESULTS

Table No. 5: Showing Physico - chemical analysis results of *Anjhadadi Malahara.*

PARAMETER	RESULT
Uniformity of content	Uniform
Loss on drying at 105^0 C	0.14%.
Total fatty matter	95.609 %
Spreadability	38.69 cm^2/g.
GC – MS	Attached

Table No.6: Showing microbial limit tests results of *Anjhadadi Malahara.*

PARAMETER	UNIT OF MEASURE	RESULTS
Total Aerobic Microbial Count	CFU/gm/ml	$\leq 10^3$
Total Yeast and Mould Count (TYMC)	CFU/gm/ml	$\leq 10^2$

CFU- Colony Forming Units

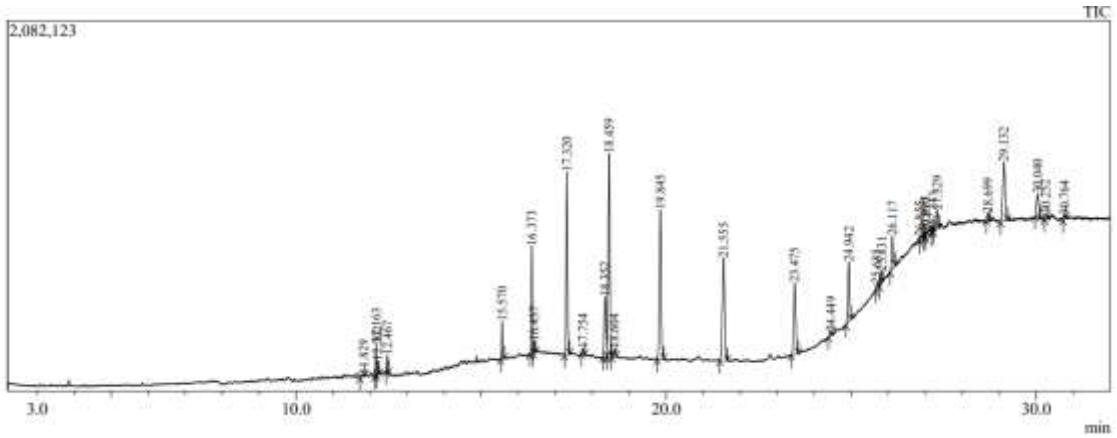

Figure No. 1: The Gas chromatography- mass spectrometry profile of *Anjhadadi Malahara.*

Table No. 7: Showing detailed peak reports of GC-MS of *Anjhadadi Malahara.*

Peak Report TLC						
Peak#	**R.Time**	**Area%**	**Height%**	**A/H**	**Mark**	**Name**
1	11.829	0.37	0.20	5.67		3-Chloro-7-hydroxy-4H-chromen
2	12.163	1.34	2.59	1.64		aR-Turmerone
3	12.202	0.56	1.08	1.64	V	Tumerone
4	12.467	0.67	1.35	1.58		Curlone
5	15.570	1.71	2.99	1.81		Hexacosane
6	16.373	5.70	8.54	2.11		Heneicosane
7	16.437	0.57	0.91	1.97	V	Glycidyl palmitate

8	17.320	11.09	14.51	2.42		Heneicosane
9	17.754	0.36	0.45	2.53		Oleoyl chloride
10	18.352	5.21	4.76	3.46		9,12-Octadecadienoic acid (Z,
11	18.459	15.62	16.16	3.06	V	Heneicosane
12	18.604	0.59	0.64	2.91	V	Glycidyl palmitate
13	19.845	13.85	11.89	3.68		Hexacosane
14	21.555	11.40	8.16	4.42		Hexacosane
15	23.475	7.00	5.70	3.89		Hexacosane
16	24.449	0.42	0.38	3.52		Nonacosane
17	24.942	5.00	4.75	3.33		Tetratetracontane
18	25.685	0.34	0.39	2.70		Eicosane, 1-iodo-
19	25.831	0.89	0.97	2.88		Oxirane, tetradecyl-
20	26.117	2.53	2.65	3.02		Nonacosane
21	26.855	0.58	0.32	5.66	V	2-Methyldocosane
22	26.990	0.28	0.33	2.68	V	5-Hexenoic acid, 6-[p-chloroph
23	27.015	0.86	0.40	6.79	V	1,2-Bis(trimethylsilyl)benzene
24	27.211	0.50	0.49	3.26	V	beta.-Tocopherol
25	27.329	1.77	1.51	3.71	V	Heneicosane
26	28.699	0.63	0.59	3.35		Eicosane
27	29.132	6.71	4.69	4.52		(+)-Sesamin
28	30.040	2.61	1.89	4.38		5-(((1R,3aR,4S,6aR)-4-(Benz
29	30.252	0.48	0.36	4.12	V	Di-n-decylsulfone
30	30.764	0.38	0.34	3.55	V	Cyclohexane, octadecyl-

Table No. 8: Showing details of the Components along with its it's medicinal role.

Peak#	R.Time	Compound Name	Formula	Molecular weight	Peak Area	CAS Registry number	Therapeutic Utility
1	11.829	3-Chloro-7-hydroxy-4H-chromen-4-one	$C_9H_5ClO_3$	268	81971	685848253	-
2	12.163	aR-Turmerone	$C_{15}H_{20}O$	216	300371	532-65-0	Anti-oxidant, Anti-tyrosinase Anti-inflammatory, Anti-cancerous, Anti-microbial
3	12.202	Tumerone	$C_{15}H_{22}O$	218	124947	180315-67-7	Anti-inflammatory, immunomodulatory, Anti-proliferative, Anti-cancerous, Anti-fungal
4	12.467	Curlone	$C_{15}H_{22}O$	218	151077	87440-60-6	Anti-inflammatory, Anti-haemorrhagic, Anti-bacterial, Anti-fungal
5	15.570	Hexacosane	$C_{26}H_{54}$	366	384246	630-01-3	Anti-inflammatory, Analgesic, and Anti-pyretic

6	16.373	Heneicosane	$C_{21}H_{44}$	296	1277569	629-94-7	Anti-microbial, Anti-neoplastic
7	16.437	Glycidyl palmitate	$C_{19}H_{36}O_3$	312	126781	7501-44-2	Anti-bacterial, Anti-inflammatory
8	17.320	Heneicosane	$C_{21}H_{44}$	296	2487275	629-94-7	Anti-microbial, Anti-neoplastic
9	17.754	Oleoyl chloride	$Cl_8H_{33}ClO$	300	80497	112-77-6	-
10	18.352	9,12-Octadecadienoic acid (Z,Z)	$C_{21}H_{38}O_4$	354	1167885	3443-82-1	Antibacterial Activity, Antioxidant, Metabolites with Antimicrobial Activity, Cytotoxic Activity
11	18.459	Heneicosane	$C_{21}H_{44}$	296	3501390	629-94-7	Anti-microbial, Anti-neoplastic
12	18.604	Glycidyl palmitate	$C_{19}H_{34}O_3$	310	131790	213738-77-3	Anti-bacterial, Anti-inflammatory
13	19.845	Hexacosane	$C_{26}H_{54}$	366	3104601	630-01-3	Anti-inflammatory, Analgesic, and Anti-pyretic
14	21.555	Hexacosane	$C_{26}H_{54}$	366	2555942	630-01-3	Anti-inflammatory, Analgesic, Antioxidant effects
15	23.475	Hexacosane	$C_{26}H_{54}$	366	1570040	630-01-3	Anti-inflammatory, Analgesic, Antioxidant effects
16	24.449	Nonacosane	$C_{29}H_{60}$	408	94430	630-03-5	Anti-oxidant
17	24.942	Tetratetracontane	$C_{44}H_{90}$	618	1121035	7098-22-8	Human metabolite
18	25.685	Eicosane, 1-iodo-	$C_{20}H_{41}I$	408	75381	0-00-0	Strong Anti-inflammatory, analgesic, promote wound healing
19	25.831	Oxirane, tetradecyl-	$C_{16}H_{32}O$	240	198618	7320-37-8	Anti-cancerous, Anti-oxidant
20	26.117	Nonacosane	$C_{29}H_{60}$	408	568012	630-03-5	Antibacterial effects
21	26.855	2-Methyldocosane	$C_{23}H_{48}$	324	129594	1560-81-2	Anti-oxidant, Anti-microbial
22	26.990	5-Hexenoic acid, 6-(p - chlorophenyl)	$C_{14}H_{13}ClO_4$	280	63263	76781-59-4	Anti-oxidant, Analgesic
23	27.015	1,2-Bis(trimethylsilyl)benzene	$C_{12}H_{22}Si_2$	222	192659	17151-09-6	Anti-thrombotic, Anti- inflammatory, Anti-helminthic
24	27.211	.beta.-Tocopherol	$C_{28}H_{48}O_2$	416	113100	148-03-8	Anti-oxidant, Anti-inflammatory, improves appearance and texture of the skin
25	27.329	Heneicosane	$C_{21}H_{44}$	296	396269	629-94-7	Anti-microbial, Anti-

							neoplastic
26	28.699	Eicosane	$C_{20}H_{42}$	282	141003	112-95-8	Anti-inflammatory, Anti-microbial effect, wound healing property
27	29.132	(+)-Sesamin	$C_{20}H_{18}O_6$	354	1503645	607-80-7	Antibacterial Activity, Antioxidant, Antiulcer, Anti-inflammatory effects
28	30.040	5-(((1R,3aR,4S,6aR)-4-(Benzo (d))	$C_{20}H_{18}O_8$	370	585525	526-07-8	Antimicrobial, Antifungal effects
29	30.252	Di-n-decylsulfone	$C_{20}H_{42}O_2S$	346	106553	111530-37-1	Antifungal
30	30.764	Cyclohexane, octadecyl-	$C_{24}H_{48}$	336	85675	4445-06-1	Anti-fungal, Anti-oxidant

Table No. 9: Showing detailed traces of minor compounds present in *Anjhadadi Malahara.*

Atlantone at R.T – 11.835	Chief anti-oxidant constituent found in Turmeric
Carvyl angelate at R.T – 12.165	Strong inhibitory potential against Gram ± Bacteria
Cyclo-hexane-carboxamide at R.T – 12.470	Anti – microbial activity
Pentacosane at R.T – 15.570	Anti-inflammatory, Anti-cancerous, Anti-microbial
Oleic acid at R.T – 17.755	Anti-inflammatory
Glycidol stearate at R.T – 18.350	Primarily used in skincare cosmetics, for its emollient property
Oxirane at R.T – 25.830	Anti – psoriatic, Anti-inflammatory, Anti-cancerous, Anti-microbial
Amino – 4 piperonyl – 5 – pyrazole at R.T – 30.045	Bio – enhancer, helps body absorb medicines more effectively
Trichloroacetic acid – at R.T - 30.035	Mainly used to remove pre – cancerous lesions on the face.

DISCUSSION

Traditional medicine encompasses a diverse array of health practices, approaches, and beliefs that have evolved over centuries. It is rooted in the cultural heritage of societies and often utilizes natural resources, including plants, minerals, and animal products, to promote health and treat illness.

Herbal formulations, such as *Anjhadadi Taila mentioned in Sahasrayogam*, play a crucial role in Ayurvedic practices, providing therapeutic benefits in *Osta Rogas* that are attributed to the synergistic effects of their constituents.

In the context of this study, the modification of *Anjhadadi Taila* into the modified *Malahara* form represents an innovative approach to enhance the therapeutic potential of a classical formulation. By conducting a comprehensive physico-chemical analysis, this research aims to provide a scientific foundation for understanding the benefits and limitations of both formulations. The results can contribute to a broader acceptance of traditional medicine by demonstrating its relevance and applicability in contemporary therapeutic contexts.

The findings from this study will be instrumental in paving the way for future research and clinical applications, ultimately enhancing the role of traditional formulations in modern healthcare.

For the precise dose of administration at affected site, modified form of *Anjhadadi Malahara* (ointment) was comparatively acceptable dosage form than of *Anjhadadi Taila*.

For the modification of *Anjhadadi Malahara*, Beeswax was selected as an ideal ointment base as animal fats, vegetable oils are readily penetrated deep through the skin tissues and medicaments are absorbed readily into the blood stream, whereas liquid paraffins don't.[4]

For the firm texture and to avoid *Anjhadadi Malahara* from causing excessive aeration, constant minimal temperature (60 ℃) was maintained by adopting double boiling method. On quality evaluation of Organoleptic characters, colour found to be dark olive green. The probable reason may be due to the presence of chlorophyl content in the fresh juice of *Nirgundi*, *Nimba* and *Bhumyamalaki*. Combination of beeswax and *Tila Taila* in the final product yield the soft consistency. The texture of the *Anjhadadi Malahara* was smooth and on application showed even distribution in the applied area indicating the uniformity in the content of the final product.

Profile peak report of TLC plates (Table No.6) shows retention time (R.T) and concentration of the components present in the *Anjhadadi Malahara*.

- GC-MS analysis reports has shown peaks of total 30 components present at retention time (R.T) ranging from 11.829 to 30.764. Major components present in *Anjhadadi Malahara* are Heneicosane (at R.T- 16.373, 17.320, 18.459), 9,12- Octadecadienoic acid (Z,Z) (at

R.T – 18.352), Hexacosane (at R.T – 19.845, 21.555, 23.475), Tetratetracontane (at R.T – (24.942), (+)-Sesamin (at R.T – 29.132).

- On screening, the presence of various chemical components raised from the GC-MS profile in raw drugs used for the preparation following details are documented:
- Eicosane (C20) (at R.T 25.831, 28.699), Heneicosane (C21) (at R.T- 16.373, 17.320, 18.459), Hexacosane (C26) (at R.T – 19.845, 21.555, 23.475), Nonacosane (C29) (at R.T – 24.449), Tetratetracontane (C34) were found as, Beeswax used as the base in the ointment is composed of esters – 67%, hydrocarbon-14 %, fatty acids – 12 %, alcohol – 1 %. Study's shows Eicosane present in beeswax is effective against gram ± bacteria as well as fungi (Tulloch, 1980).[5]
- Oxirane, tetradecyl (at R.T 25.831), present in *Nimba* (*Azadirachta indica* A.Juss.) reported to have antioxidant, anti-inflammatory activities. 9,12-Octadecadienoic acid (Z,Z) also known as linolenic acid, flavonoids known for its potential anti-bacterial, anti-fungal, anti-helminthic, anti- septic and anti- cancer activity.[6]
- Glycidyl palmitate[7] (at R.T 18.604), present in *Tila Taila* (*Sesamum indicum* Linn.) has antibacterial, anti- inflammatory effects.
- 5-(((1R,3aR,4S,6aR)-4-(Benzo (d))[8] (at R.T 30.040), 1,2- Bis(trimethylsilyl)benzene[9] (at R.T 27.015) also called Orcinol present in *Bhumyamalaki* (*Phyllanthus amarus* Webst.), known for anti- oxidant, anti- inflammatory, anti-helminthic property.
- aR-Turmerone[10] (at R.T 12.163), Turmerone[11] (at R.T 12,202), Curlone [12] (at R.T 12.467), present in rhizome of *Haridra* (*Curcuma longa* Linn.) has anti-oxidant, anti-inflammatory, anti-cancerous, anti-microbial property.
- 5- Hexenoic acid, 6-(p - chlorophenyl) (at R.T 26.990), Tetratetracontane (at R.T 24.942), 2-Methyldocosane (at R.T 26.855) present in leaves of *Nirgundi* (*Vitex negundo* Linn.) reported to have significant radical scavenging potential related to their anti-inflammatory, analgesic activity.[13]

- Considering the reports of GCMS it gives clarity that most of the bio molecules present in the formulation are having anti-oxidant, anti-inflammatory, anti-microbial properties. Beeswax, as the base has emollient and occlusive effect that helps in healing and protection of the lips from various causative factors.
- Probable mode of action of *Anjhadadi Taila* is most of the ingredients are predominant with *Tikta, Madhura Rasa, Laghu Ruksha Guna, Ushna Veerya* and *Katu Vipaka*. It possesses *Kaphapittashamana* properties, together with *Vrana Ropana* (wound healing and anti-ulcergenic), *Rasayana* (anti-oxidant), *Shothahara* (anti-inflammatory),

Krimihara (anti-microbial), *Raktashodhaka* (blood purifier), *Raktasthambaka* (styptic), *Vedanasthapaka* (analgesic) and *Daha Shamaka* (reduces burning sensation) properties.

- *Anjhadadi Malahara* has *Prasadana* and *Ropana* property that helps in healing and treating of the ulcer associated with wound and swelling.
- The phytoconstituents present in this formulation are rich in Flavonoids (anti-oxidative, anti-inflammatory), Terpenoids (anticancer, anti-microbial, anti-inflammatory), Polyphenols like Quercetin (anti-viral), Tannins- a class of astringent, polyphenolic biomolecules including amino acids and alkaloids. Thus, drugs present possess potent anti-inflammatory, anti-microbial, astringent, antioxidant properties, also helps in reducing risk of cancer.

CONCLUSION

Anjhdadi Taila can be easily modified into *Malahara* form and the desired consistency can be obtained. GCMS analysis of *Anjhadadi Malahara* has shown total number of 30 peaks (9 major peak, 21 minor peaks) each at various retention time; and the instrumental analysis of GCMS was used to access the quality. The combined action of biomolecules presents results in the therapeutic actions of the formulation and analysis helped to develop preliminary standard for the formulation.

Preparation Photo

Ingredients gathered	**Prepared *Kalka, Swarasa, Taila***	**Preparation of *Anjhadadi Taila***
		

Final stage of *Anjhadadi Taila*	Confirmatory test done	Final product of *Anjhadadi Taila*
	 	

Figure No.2 Preparation of *Anjhadadi Taila.*

Heating of *AnjhadadiTaila* for *Malahara* Preparation	Addition of Beeswax	Filled the content in Sterile Squeeze tubes (10ml each)
		

Final product of *Anjhadadi Malahara*	Uniformity test performed
	

Figure No.3: Modification into *Anjhadadi Malahara.*

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