ANALYTICAL STUDY OF *ERANDADITAILA*:AN AYUREVDIC FORMULATION.

ABSTRACT

ErandadiTaila is a classical *Ayurvedic* medicated oil indicated in the management of*Karnanada* (Tinnitus)for*Abhyanga*, *Nasya*and*Karnapoorana*. *Karnanada* is a *Vata* predominant disorder of the ear as described in *Ayurvedic* classics.*Tailakalpana* is considered highly effective in pacifying aggravated *Vatadoṣha* due to its *Snigdha* and *Ushna* properties. Analytical evaluation of formulation is essential to ensure quality, purity and therapeutic consistency. The present study aims to carry out an analytical assessment of *ErandadiTaila* with reference to organoleptic, physiochemical and pharmaceutical parameters, HPTLC profile, thereby contributing to standardization of the formulation and validating its suitability for clinical application.

Key Words: *ErandadiTaila*, Analytical study,

INTRODUCTION:

ErandadiTaila is mentioned in authoritative texts like *AshtangaHridaya*, as an effective formulation for*Karnanada* and*Badhirya*when used for procedures such as *Abhyanga*, *Karnapooraṇa* and *Nasya*[1].The inherent properties of *Taila*—such as*Snigdha*, *Guru*, and*Ushna*[2]provide a pharmacological action which is contrast to the *Ruksha*, *Laghu*,*Sheeta* and *Chala* nature of *Vata*[3]effectively restoring physiological balance.*Ayurveda* places significant emphasis on *Snehakalpana*, particularly *Taila* preparations, for the management of *Vata*-dominant disorders like *Karnanada. Taila* serves as an excellent carrier for active principles, allowing deeper tissue penetration and enhanced therapeutic action.For any formulation intended for clinical use, especially in sensitive therapeutic procedures like *Nasya* and *Karnapoorana*, standardization and quality assessment are essential. Analytical evaluation as per the Ayurvedic Pharmacopoeia of India (API) ensures the safety, purity, stability and reproducibility of the formulation.Hence, the present study has been undertaken to carry out an analytical evaluation of *ErandadiTaila*, with the objective of establishing its physicochemical standards and validating its suitability for therapeutic use in the management of *Karnanada*(Tinnitus).

MATERIALAND METHOD:

Collection of Raw Drugs

Raw drugsof *ErandadiTaila*were collected from the well-known dry herb seller Panna Lal Brij Lal, Haridwar.

Identification and Authentication

Raw drugs of *ErandadiTaila* were identified and authenticated by PG Department of *DravyaGuna*, Rishikul Campus, Haridwar, Uttarakhand. The final product *ErandadiTaila*was prepared in Anamika Pharmacy, Sidkul, Haridwar, Uttarakhand

Table 1: Pharmacological properties of *ErandadiTaila*.

DRUGS	LATIN NAME	FAMILY	PART USED	*DOSHA KARMA*	KARMA	PHARMACOL ACTIO
Eranda	*Ricinus communis*	*Euphorbiaceae*	*Patra*	*Kapha**Vata shamak***	*NaadiDaurblyanashak, Balya, Vata vyadhinashak*	Anti-Oxi
Shigru	*Moringa olifera*	*Moringaceae*	*Patra*	***Vata**kapha shamak*	*NaadiDaurbalyanashak*	Anti-Oxi
Varuna	*Crataevanurvala*	*Capparidaceae*	*Patra*	*Kapha**Vata shamak***	*Anulomaka*	Anti-Oxi Neuroprot
Moolaka	*Raphanus sativus*	*Cruciferae*	*Patra*	*Tridhoshashamak*	*Vata anulomaka*	Anti- Ox
Ashwgandha	*Withaniasomnifera*	*Solanaceae*	*Moola*	*Kapha **Vatashamak***	*Rasayana, Balaya, Naadibalya Anulomaka*	Anti-Oxidar anxiety,Ant Immunomodul depress
Yastimadhu	*Glycyrrhiza glabra*	*Leguminasae*	*Moola*	*Kapha**Vata shamak***	*Balya, NaadiBaldaayak*	Anti-Oxi
Go Dugdha				***Vata**pittashamak*		
Tila taila	*Sesamum indicum*	*Pedaliaceae*	*Beej, Tail*	***Vata shamak***	*Snehan,Balya, Vataroghara*	Anti-oxidant

Fig.-1. *Eranda*

Fig.-2. *Shigru*

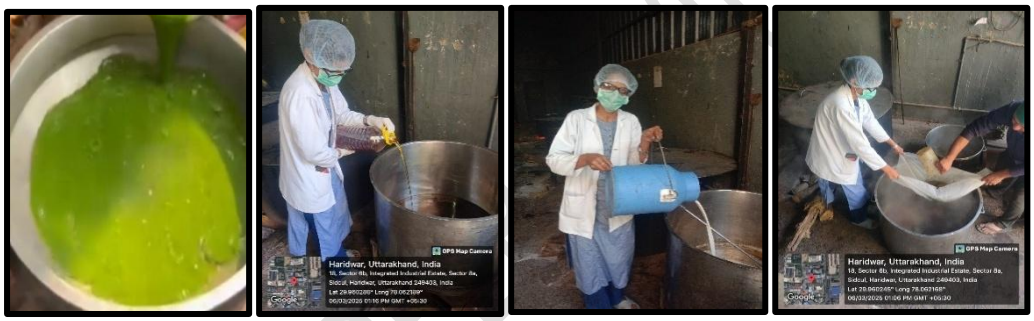
Fig.-3. *Varuna*

Fig.-4. *Moolaka*

Fig.-5. *Yasthimadhu* Fig.-6. *Ashwagandha*Fig.-7. *TilaTaila* Fig.-8.*Go-Dugdha*

Preparation of *ErandadiTaila*:

MoorchitaTilaTaila was taken as base oil.Fresh leaves of *Eranda*, *Shigru*, *Varuna*, *Moolaka* were taken, cleaned, crushed and expressed to obtain fresh *Swarasa*. Total quantity of *swarasa* obtained was 20 litres.Meanwhile40 litre *Go-Dugdha* was kept ready.Dry & clean *Yastimadhumoola* and*Ashwagandhamoola* were pulverized.Thepowders were triturated with sufficient water to prepare a *kalka*.In a clean vessel *moorchitaTilaTaila* was taken & the prepared *kalka* was added to the oil & mixed thoroughly.*Swarasa*&*Go-Dugdha* were added gradually with constant stirring.The mixture was subjected to mild to moderate heating with continuous stirring to prevent charring at the bottom.The process of heating was continued until the complete evaporation of the aqueous medium.The *siddhilakshana* of *Madhyamapaka* were observed. (***Madhyam Sarvakarmasu- Sharangdhara***).[4]The oil was filtered two to three times through a clean muslin cloth to separate the residual *kalka*.The filtered oil was packed in air tight containers.



Final Product

ANALYTICAL STUDY:

ErandadiTaila was tested at Multani Pharmaceutical limited, Khasra no.37,Bhagwanpur, Haridwar for a number of characteristics, including their organoleptic&physiochemical (table 2), heavy metal (table 3), and microbial limit count (table 4).

Table: 2 Organoleptic & Physiochemical parameters

Sr.no.	Test Parameter	Result	Method Reference
1.	Colour	Yellowish brown	API
2.	Appearance	Oily liquid	API
3.	Odour	Characteristics	API
4.	Taste	Characteristics	API
5.	Texture	Liquid	API
6.	Refractive index at 40^0c	1.4706	API
7.	Weight per ml	0.9165	API
8.	Acid value	1.18	API
9.	Peroxide value	1.51	API
10.	Saponification value	180.8	API
11.	Viscosity	12cps	API
12.	HPTLC	Complies	API

Table:3 Heavy Metals:

Sr.no.	Test Parameter	Result	Method Reference
1.	Lead (Pb)	0.253ppm	API
2.	Arsenic(As)	<0.50ppm	API
3.	Cadmium(Cd)	<0.01ppm	API
4.	Mercury(Hg)	<0.01ppm	API

Table:4 Microbiological Limit Test:

Sr.no.	Test Parameter	Result	Method Reference
1.	Total Bacterial count	20 cfu/g	API
2.	Total Yeast & mould count	<10 cfu/g	API
3.	Salmonella Species	Absent	API
4.	*Pseudomonasaeruginosa*	Absent	API
5.	*E.Coli*	Absent	API
6.	*Staphylococcusaureus*	Absent	API

Multani
ANALYTICAL DIVISION

MULTANI PHARMACEUTICALS LIMITED
(ANALYTICAL DIVISION)
(A GOVT. APPROVED TESTING LABORATORY)

TEST REPORT

Sample Common Name : ERANDADI TAILA
Generic Name : ERANDADI TAILA
Report No. : MPLAD/AYF20250814008
Report Dated : 29/08/2025

Batch / Lot No.	Pack Size	Mfg. Date	Exp. Date	Batch Size	Sample Quantity
NS	NS	NS	NS	NS	100ml

Sample Condition : NS
Sample reference : NS
Sample Registration No. : AYF20250814008
Location of Test (s) Performed : Multani Pharmaceuticals Limited (Analytical Division)
Sample Manufactured By : NS
Mfg. License No. of Customer : NS
Sample Supplied By : NS
Sample Submitted By : Dr. Poonam Rani
Address of Customer :

Sample received on : 14/08/2025
Analysis started on : 15/08/2025
Analysis completed on : 29/08/2025
Reference to Protocol : The Ayurvedic Pharmacopoeia of India.
Discipline : Chemical and Biological
Description : A yellowish brown colour oil.
Group : Ayush Products

RESULTS OF ANALYSIS

S.No.	Test Parameters	Results	Specifications	Method Reference
1	Colour	Yellowish brown		API
2	Odour	Characterstics		API
3	HPTLC	Complies		API
4	Taste	Characterstics		API
5	Appearance	oily liquid.		API
6	Texture	liquid.		API
7	Refractive Index at 40°C	1.4706		API
8	Weight per ml	0.9165		API
9	Acid Value	1.18		API
10	Peroxide Value	1.51		API
11	Saponification Value	180.8		API
12	Viscosity	12cps		API
13	Heavy Metals	-		
	Lead (Pb)	0.253ppm		API
	Arsenic (As)	Less than 0.50ppm		API

Balwant Singh
Person In-Charge
Authorized Signatory

82

83

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MULTANI PHARMACEUTICALS LIMITED
(ANALYTICAL DIVISION)
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TEST REPORT

Sample Common Name : ERANDADI TAILA
Generic Name : ERANDADI TAILA
Report No. : MPLAD/AYF20250814008
Report Dated : 29/08/2025

	Cadmium (Cd)	Less than 0.01ppm		API
	Mercury (Hg)	Less than 0.01ppm		API
14	Microbiological Limit Test	-		
	Total Bacterial count	20 cfu/g		API
	Total Yeast and mould count	Less than 10cfu/g		API
	Salmonella Species	Absent		API
	Pseudomonas aeruginosa	Absent		API
	Escherichia Coli	Absent		API
	Staphylococcus aureus	Absent		API

Remarks : Note :- Party asked for the above tests only.

Abbreviations : NS: Not Specified & API : The Ayurvedic Pharmacopoeia of India.

————End of Report————

Balwant Singh
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84

DISCUSSION:

ErandadiTaila is a classical *Ayurvedic* formulation indicated in diseases of the ear such as *Karnanada* (Tinnitus), *Badhirya* etc. As *Karnanada* is described as a *Vata-pradhanaVyadhi*, the use of a *Snigdha*,*Ushna* and *Vata-shamakaTaila* is therapeutically appropriate.In the present analytical study, *ErandadiTaila* was evaluated according to the Ayurvedic Pharmacopoeia of India (API) standards.Organoleptic characters such as yellowish-brown colour, characteristic odour, oily liquid appearance and texture confirmed the authenticity and classical nature of the formulation. Physicochemical parameters including refractive index and weight per ml were within acceptable limits, indicating proper processing and stability of the oil.Low acid value and peroxide valuesuggest minimal hydrolytic and oxidative degradation, reflecting good shelf stability and suitability for sensitive procedures like *Nasya* and *Karnapoorana*. The saponification value supports the presence of fatty acids conducive to better absorption and tissue penetration, while viscosity ensures adequate retention within the auditory canal during *Karnapoorana*.The formulation complied with HPTLC standards, confirming phytochemical consistency. Heavy metal analysis revealed levels well within permissible limits, and mercury and cadmium were below detectable limits, ensuring safety. Microbiological evaluation showed negligible microbial load with complete absence of pathogenic organisms, making the formulation safe for therapeutic use.Thus, the analytical findings validate that *ErandadiTaila* is a safe, stable and standardized formulation, supporting its classical indication in the management of *Karnanada* (Tinnitus), where it helps pacify vitiated *Vata*, nourish auditory structures and restore normal function.

CONCLUSION:

The present analytical study concludes that *ErandadiTaila*, when evaluated as per the standards of the Ayurvedic Pharmacopoeia of India, fulfills all essential organoleptic, physicochemical, safety and microbiological parameters. The results confirm that the formulation is stable, safe, and of acceptable quality for therapeutic use. The physicochemical values indicate good stability and suitability for procedures like *Karnapoorana* and *Nasya*, while the absence of harmful heavy metals and pathogenic microorganisms ensures its safety for clinical application in *Karnanada*(Tinnitus).

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