



# The Role Of *Soymida Febrifuga* (Roxb.) A. Juss. In Treating Leucorrhea: Qualitative Insights From Traditional Healthcare Practices

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**Abstract:** - Leucorrhea, a prevalent gynecological condition characterized by abnormal vaginal discharge, significantly impacts women's health globally. This study delves into the traditional healthcare practices surrounding *\*Soymida febrifuga\** (Roxb.) A. Juss., a plant widely recognized in ethnobotanical contexts for its diverse medicinal properties, particularly in managing women's health issues. Through qualitative inquiry, this research documents the specific preparation methods, administration routes, and perceived therapeutic outcomes associated with the use of *\*Soymida febrifuga\** for leucorrhea management among indigenous practitioners. The findings highlight the deep-rooted cultural significance of this botanical resource and provide a foundation for future scientific validation of its bioactive potential in gynecological care.

**Index Terms-** Leucorrhea, *Soymida febrifuga*, ethnobotany, gynecology.

## I. INTRODUCTION: -

*Soymida febrifuga* (Roxb.) A. Juss. Throughout history, various traditional practices and treatments have been employed to preserve health, avert illness, and manage different health issues, with particular focus often placed on gynecological conditions like heavy bleeding and pregnancy care (Wale et al., 2024, 2025). Research in ethnobotany shows that medicinal plants are crucial in tackling women's health issues, encompassing menstrual regulation, recovery after childbirth, and the management of vaginal bleeding, across a range of cultural contexts (Lamxay et al., 2011; Wale et al., 2024). These methods significantly depend on indigenous knowledge systems, where local healers utilize particular plant species to confront reproductive health challenges, frequently acting as the primary and, at times, the sole means of healthcare available to women in rural or resource-constrained areas (Khadim et al., 2023). Although many people rely on indigenous practices, there is a scarcity of reports on ethno-gynecology, with only several studies documenting the medicinal plants that rural women use to treat gynecological ailments (Khadim et al., 2023). Traditional medicine systems frequently provide culturally appropriate and accessible solutions for such issues, especially in areas where conventional healthcare is not readily available. The study of ethno-gynecology has become an essential research area, concentrating on the use of medicinal plants to address specific gynecological issues like menstruation problems, leucorrhea, and infertility (Khadim et al., 2023). Gynecological conditions impose a considerable strain on reproductive health, leading to a sustained use of herbal treatments as a key healthcare approach in numerous developing areas (Kumar, 2023; Niyaz et al., 2023). In India, around 65% of the populace still relies on traditional health practices for a variety of ailments, highlighting the persistent importance of indigenous knowledge in modern public health (Kumar, 2023). This dependence is especially evident in

rural and tribal communities, where traditional medicine systems are the primary source of basic healthcare services due to insufficient modern facilities and strong cultural convictions regarding the effectiveness of folk remedies (Niyaz et al., 2023). Herbal therapies are the most common type of traditional treatment, with women being the predominant users of these traditional resources to address reproductive health challenges such as menstrual irregularities, infertility, and various discomforts associated with pregnancy and menopause (Boer & Cotington, 2013). The inclination towards herbal treatments is frequently motivated by the belief that botanical remedies are safer and more effective than conventional therapies, which can lead to negative side effects such as hormonal imbalances or organ damage when used for extended durations (Khadim et al., 2023). Nevertheless, although traditional remedies are commonly viewed as safer options, the scientific proof backing their effectiveness in gynecological care is still scarce, with a limited number of quantitative studies having properly assessed these traditional solutions for women's health concerns (Kumar, 2023). As a result, there is an urgent necessity to record and scientifically validate the local knowledge related to specific medicinal plants utilized in these traditional remedies for women's health issues (Bozkurt, 2021; Kumar, 2023). This documentation is crucial for both safeguarding cultural heritage and recognizing potential therapeutic agents that may overcome the constraints of existing conventional treatments (Kumar, 2023; Sarkar et al., 2023).

## II. TRADITIONAL MEDICINE AND ETHNOBOTANY: -

The urgent need for the integration of non-codified traditional medical systems, encompassing local health traditions and ethnomedical practices, is essential to safeguard these indigenous knowledge systems that local communities rely on to manage plants sustainably and support biodiversity conservation (Daniel, 2024). Achieving this integration calls for cooperative efforts among governments, scholars, communities, and local healers to record and safeguard traditional knowledge, while providing education and training to local healers and younger generations to avert the decline of these cultural practices (Ralte et al., 2024). This systematic preservation is vital for substantiating traditional applications through scientific research, as it is important to generate evidence on biological efficacy, safety, and phytochemicals for the advancement of natural product research from its source to clinical trials (Aremu et al., 2024). Ethnobotanical research acts as an interdisciplinary hub for traditional healing methods, playing an essential role in preserving biodiversity, managing resources sustainably, and identifying new therapeutic agents (Wang et al., 2025). Medicinal plants are crucial components of the pharmacopoeia in numerous traditional healthcare systems, and although around 28,187 species have been recognized for usage in plant-derived medicine, the majority have not undergone assessment through contemporary laboratory methods (Vandebroek et al., 2020). This deficiency in scientific verification highlights the critical necessity for thorough phytochemical and pharmacological investigations to validate the health benefits attributed to these species and to guarantee their safety and effectiveness for current clinical uses (Khoja et al., 2024; Wang et al., 2025).

## III. MORPHOLOGICAL PROFILE: -

The species is a tall deciduous tree, reaching heights of 22 to 25 meters. It forms a large crown, with the leaves predominantly clustered at the branch tips, creating a dense appearance at the top (Jhala et al. 2005; Gangurde et al. 2008; Singh et al. 2022). The bark measures approximately 8 mm in thickness, ranging in color from dark brown to blackish, and has a distinctly bitter flavor. It peels off in uneven plates or scales. The leaves are compound, measuring between 22 and 45 cm in length, and grow in clusters near the ends of the branches. The leaflets are arranged in 3 to 6 opposing pairs, are elliptic to oblong in shape, measuring 4.5 to 15 cm by 4 to 15 cm, are smooth, and have either an obtuse or rounded tip. The venation is pinnate, featuring many prominent veins on the underside. The flowers are small and exhibit a greenish-white color. The calyx consists of five rounded sepals that feature membranous margins with slight lacerations. The corolla is made up of five obovate petals, approximately 6 mm in length. The fruit forms a large woody capsule that ranges from 2.5 to 7.5 cm long, with shapes that can be ovoid, ellipsoid, obovoid, or oblong. Once mature, it turns reddish-purple to blackish-brown. The capsule is septifragal, made up of five chambers and five valves that detach from a thick, spongy, persistent central axis. The fruits mature between May and June. Each capsule holds numerous seeds that are flat and winged on both ends. These seeds are covered in a soft, feathery layer that helps with their dispersal.

## IV. CLASSIFICATION: -

Table 1: - Classification of *Soymida febrifuga* (Roxb.) A. Juss.

Taxonomical Rank	Taxon
Kingdom	Plantae
Phylum	Magnoliophyta
Class	Magnoliopsida
Subclass	Rosidae
Order	Sapindales
Family	Meliaceae
Genus	<i>Soymida</i>
Species	<i>Soymida febrifuga</i> (Roxb.) A. Juss.

V. FIELD PHOTOGRAPHS OF *SOYMIDA FEBRIFUGA*: -Fig. 1 & 2 *Soymida febrifuga* (Roxb.) A. Juss. Tree & Informant Shri. Sudhakar Ramaji Tekam



Fig. 3 & 4 *Soymida febrifuga* (Roxb.) A. Juss. Bark Sample

## VI. GEOGRAPHICAL DISTRIBUTION OF THE PLANT: -

*Soymida febrifuga* is primarily native to the Indian subcontinent, where it thrives in the dry deciduous forests of Central, Southern, and Western India, particularly across the Deccan Peninsula and the Eastern Ghats. Its range also extends to Sri Lanka, Myanmar, and Bangladesh, where it typically grows on stony hill slopes and well-drained soils at elevations between 400 and 1,000 meters. According to the IUCN Red List, the species is often found in association with teak and bamboo in tropical scrub habitats.

## VII. LEUCORRHEA: ETIOLOGY AND CONVENTIONAL TREATMENTS: -

Leucorrhea is a common gynecological issue marked by unusual vaginal discharge which presents significant diagnostic and therapeutic challenges in both traditional and modern medical systems. While conventional medicine primarily attributes this condition to infections such as candidiasis, bacterial vaginosis, or trichomoniasis, traditional perspectives often associate it with systemic imbalances, poor hygiene, or nutritional deficiencies (Nargawe et al., 2023). In traditional medical frameworks, particularly those prevalent in rural and indigenous communities, the etiology of leucorrhea is frequently conceptualized through a holistic lens that considers physiological, environmental, and lifestyle factors rather than solely focusing on microbial pathogens (Nargawe et al., 2023). This holistic approach often encompasses dietary habits, emotional stress, and constitutional weaknesses, reflecting a broader understanding of women's health that extends beyond the symptomatic treatment of infection (D.O. et al., 2020).

## VIII. OTHER ETHNOMEDICINAL USES OF SOYMIDA FEBRIFUGA: -

*Soymida febrifuga*, commonly known as the Rohini tree, occupies a prominent position in the ethnomedicinal repertoire of various indigenous communities, particularly within the Indian subcontinent where it is traditionally employed to address a spectrum of gynecological disorders. The bark, leaves, and roots of this deciduous tree are specifically utilized by traditional healers to manage conditions such as leucorrhea, menorrhagia, and other reproductive health issues, often prepared as decoctions or pastes for internal and external application (Ekbbal et al., 2023; Wang et al., 2025). These traditional preparations are grounded in indigenous knowledge systems that attribute therapeutic efficacy to the plant's inherent bioactive properties, which are believed to restore physiological balance and alleviate symptoms associated with vaginal discharge. The therapeutic application of *\*Soymida febrifuga\** is often paralleled by the use of other botanical species in traditional gynecology, such as *\*Saraca indica\**, which is similarly revered for its astringent and anti-inflammatory properties in treating uterine disorders and menorrhagia (KK, 2015). The stem bark of *\*Saraca asoca\** is the principal constituent for treating menorrhagia and genito-urinary disorders, containing flavonoids, tannins, alkaloids, glycosides, polyphenolics, fatty acids, and saponins that contribute to its therapeutic effects (Fathima et al., 2023). Similarly, the phytochemical composition of *\*Soymida febrifuga\** is believed to encompass a diverse array of secondary metabolites, including limonoids, phytosterols, and phenolic compounds, which may underpin its observed therapeutic activities in traditional gynecological care. Phytochemical

investigations into the species have identified specific classes of bioactive constituents, such as limonoids and tetranortriterpenoids, which are frequently associated with anti-inflammatory and antimicrobial mechanisms that may validate its traditional use in managing infectious etiologies of leucorrhoea.

## IX. LITERATURE REVIEW: -

Traditional medicine and ethnobotany serve as foundational pillars in global healthcare, particularly within indigenous communities where botanical resources are integral to managing gynecological disorders. In India, for instance, approximately 40% of the 16,000 known flowering plants possess ethnomedicinal potential, yet only a fraction are utilized in the pharmaceutical industry, highlighting a vast reservoir of therapeutic resources that remain underexplored (Kumar, 2023). The World Health Organization has recognized the importance of herbal and phyto-therapeutic plants for prevention, cure, and palliation, particularly in regions where the high cost of industrialized pharmaceuticals and limited access to healthcare drive the utilization of herbal therapies (Kumar, 2023).

Ethnobotany, defined as the study of the utilitarian interaction between human people and flora in their surroundings, encompasses therapeutic benefits and reflects a long, symbiotic relationship between plants and human societies that extends beyond basic needs to include health treatment (Kumar, 2023). The advantages of utilizing medicinal plants include reduced health care expenses, sickness prevention, health promotion, and the union of popular knowledge with science (Kumar, 2023).

However, this valuable ethnoecological knowledge faces the threat of extinction due to rapid modernization and the declining interest of younger generations in traditional practices, necessitating urgent documentation to prevent the loss of indigenous wisdom (Khadim et al., 2023).

Furthermore, the integration of traditional knowledge with scientific inquiry offers a significant opportunity to address a wide spectrum of ailments, particularly in environments where contemporary medications may be inaccessible or susceptible to rapid degradation (Wang et al., 2025).

The issue of secrecy and intellectual property rights amongst traditional medical care givers has made it difficult for them to disclose freely the actual medicinal plant, proportions and combinations used for treatment of specific diseases (Bafor, 2017). This reluctance to share proprietary knowledge creates barriers to the meaningful identification and documentation of medicinal plants used within communities, which must be resolved to facilitate comprehensive research and validation of these traditional therapies (Bafor, 2017).

The Convention on Biological Diversity recognizes indigenous knowledge as a sovereign treasure, requiring permission from designated government agencies and knowledge carriers for access, yet this information remains highly scattered in restricted literature or ancient languages interpretable only to a scholarly few (Cordell, 2011).

Consequently, comprehensive documentation efforts are essential to bridge the gap between indigenous wisdom and modern scientific validation, ensuring that valuable therapeutic insights are not lost to cultural erosion or environmental degradation (Dean, 2024; Sikuku et al., 2023).

Ethnobotanical documentation explores how communities interact with their surroundings, including traditions and cultural beliefs concerning how to utilize certain plants, which is important for uncovering novel medicines and highlighting the significance of native medicinal plants (Manzoor et al., 2023).

Ethnoecological knowledge can significantly contribute to a better understanding of the current socio-economic and environmental fluctuations occurring across the globe, yet the increasing trend of modern life patterns, business ways, outmigration, and rampant urbanization have strikingly caused the fragmentation of sustaining folk knowledge (Arshad et al., 2023).

The risks of knowledge loss are further exacerbated by urbanization, modern healthcare, and generational gaps, making the documentation of indigenous ethnomedicinal knowledge essential for cultural preservation, drug development, and natural resource management (Falemara et al., 2021; Manzoor et al., 2023).

## X. DOSAGE: -

To prepare a standardized bark decoction, simmer 50–75g of dried material in 1L of water until reduced to 500mL (a 1:2 concentration), administering 100–150mL twice daily for 15–30 days; rock sugar may be added to improve palatability and compliance. Alternatively, a pulverized powder (Churna) may be administered at 2–3g thrice daily using warm water and honey as a vehicle. To enhance the bioavailability of active phytochemicals, *Zingiber officinale* (ginger) and *Piper nigrum* (black pepper) serve as effective adjuvants to the formulation.

**XI. SAFETY PROFILE: -**

*Soymida febrifuga* bark is generally considered safe for the management of leukorrhoea when administered at traditional therapeutic doses (**2–3g powder** or **100–150ml decoction**), showing low acute toxicity in pharmacological studies. Its primary safety concerns involve its high **tannin content**, which can cause gastrointestinal irritation or constipation if used for more than **30 days**, and its intense bitterness, which may necessitate a sweetener to prevent nausea. While clinically effective as an **astringent and antimicrobial** for vaginal discharge, it should be avoided during **pregnancy** due to a lack of safety data, and usage should be limited to short-term cycles to ensure optimal tolerance.

**XII. METHODOLOGY: -****a. COLLECTION OF ETHNOBOTANICAL INFORMATION:**

The study incorporated traditional knowledge concerning *Soymida febrifuga*, gathered through personal consultation with local herbalists. The key informant for this study was Mr. Sudhakar Ramaji Tekam, located in Shible, Zari-Jamni Tehsil, Yavatmal District, Maharashtra, India. The data was recorded to validate the local usage and availability of the plant species in the study area.

**b. SAMPLE COLLECTION SITE: -**

The Sample is collected from the forest area of Borgaon Bandi, Zari-Jamni Tehsil, Yavatmal District, Maharashtra, India.

**c. SAMPLE DETAILS: -****Table 2: - Sample Details**

Sample Details	
Sample Quantity	650 gm
Sample Description	<i>Soymida febrifuga</i> (Roxb.) A. Juss. Bark Sample
Sample Collected by	Mr. Sarvesh Bandu Raut
Sample Collection Date	19/06/2025
Sample Collection Site	Forest area of Borgaon Bandi, Zari-Jamni Tehsil, Yavatmal District, Maharashtra, India.
Sample provided by	Vaidu Shri. Sudhakar Ramaji Tekam, Shible, Zari-Jamni Tehsil, Yavatmal District, Maharashtra, India.
Phytochemical analysis initiation date	01/07/2025
Phytochemical analysis completion date	10/07/2025

**d. PHYTOCHEMICAL ANALYSIS: -**

For the phytochemical analysis, standard protocols (Harborne 1992:1998, Kokate 1994, Abulude 2001:2007) were followed. Phytochemical analysis involves both qualitative and quantitative assessments. Qualitative analysis looks for the presence or absence of phytochemical compounds, while quantitative analysis measures the amount or concentration of these compounds in the plant sample (Panhekar et al., 2019). Various techniques are used for phytochemical analysis, from collecting medicinal plants to extracting and identifying the phytochemicals. This process determines whether

specific phyto-constituents are present or absent. If compounds are identified, quantification is done using various methods.

Phytochemical analysis starts with collecting the bark sample from the plant *Soymida febrifuga*, also known as Rakta Rohini. The collected bark sample is then rinsed thoroughly with water. After washing, they are dried using sun drying method for 2-3 weeks. Once dried, the bark is then grounded into a fine powder by using a Hammer Mill. This bark powder is mixed with ethanol in a beaker, which is the appropriate solvent for *Soymida febrifuga*. The mixture is stirred vigorously for several minutes. The beaker, containing the bark sample and solvent, is then placed in an Ultrasonicator. Ultrasonic-Assisted Extraction (UAE) is a highly efficient method for the phytochemical analysis of *Soymida febrifuga* bark, as it uses acoustic cavitation to disrupt cell walls and accelerate mass transfer. It is effective for improving extraction efficiency and yield compared to traditional methods like maceration or Soxhlet extraction. To ensure proper mixing, the mixture undergoes three cycles of 45 minutes each in the Ultrasonicator.

Afterward, the beaker with the sample is poured into the rotating round-bottom flask of the rotary evaporator. The heating bath temperature is set according to the boiling point of the solvent used. As the solvent evaporates, it rises and enters the condenser, where it cools and turns back into a liquid. The condensed solvent is collected in a separate flask, while the concentrated crude extract stays in the rotating flask. The rotary evaporator removes the solvent, leaving a residue ready for analysis.

Qualitative phyto-chemical analysis was conducted by using the general techniques outlined by Banu, K. S., & Cathrine, L. 2015 and Panhekar, et al., 2019. For **Carbohydrates**- Molisch's Test, Fehling's Test, Benedict's Test, Iodine Test are conducted, for **Proteins and amino acids**: Biuret Test, Millon's Test, Ninhydrin Test, Xanthoproteic Test. **Lipids**: Solubility Test, Translucent Spot Test, Acrolein Test. **Alkaloids**: Wagner's Test, Mayer's Test, Hager's Test, Dragendorff's Test. **Flavonoids**: Shinoda Test, Alkaline Reagent Test, Lead Acetate Test, Zinc Hydrochloride Test. **Tannins**: Ferric Chloride Test, Lead Acetate Test, Gelation Test. **Saponins**: Foam Test (Banu, K. S., & Cathrine, L., 2015). **Total Phenols**: Ferric Chloride Test.

For Quantitative analysis of the plant sample various techniques such as HPLC (High Performance Liquid Chromatography), GC-MS (Gas Chromatography – Mass Spectroscopy), HPTLC (High Performance Thin Layer Chromatography) are conducted. Detection of phyto-constituents involves using techniques like UV- Visible Spectroscopy. The techniques used for each of the phytochemicals is as follows.

**Table 3:** - Estimation of Phyto-chemicals by various Methods

Phytochemicals	Name of Test/Method
Protein	Kjeldahl method
Carbohydrates	FSSAI method
Crude Fat	Pet Ether extraction
Calories/Energy	By Calculation
Total ash	By Muffle furnace
Total Moisture	By Hot Air Oven
Saponins	Gravimetry
Total phenols	Spectrophotometer
Alkaloids	Spectrophotometer
Tannins	By HPLC
Tannic Acid	By HPLC
Glycosides	Spectrophotometer
Steroids	Spectrophotometer
Flavonoids	By Spectrophotometer

**XIII. OBSERVATION AND RESULTS: -****➤ PHYTOCHEMICAL PROFILE OF *SOYMIDA FEBRIFUGA*: -**

Phytochemical analysis of the species has revealed the presence of diverse secondary metabolites, including limonoids, tetranortriterpenoids, and phenolic compounds, which are frequently associated with anti-inflammatory and antimicrobial activities that may substantiate its traditional application in managing infectious etiologies of leucorrhea. These bioactive constituents, particularly the limonoids and tetranortriterpenoids, are structurally complex compounds that have been documented in related ethnomedicinal plants to exhibit significant antibacterial and antifungal properties, which could directly target the microbial pathogens often responsible for infectious leucorrhea (KK, 2015; Nair et al., 2024). In addition to this the phytochemical analysis shows various analytical results, including protein (0.80%), carbohydrates (45.42%), crude fat (4.16%), and energy (222.34 Kcal/100g). Additionally, it lists the contents of saponins, total phenols, alkaloids, tannins, glycosides, steroids, and flavonoids, showcasing the nutritional profile of the sample. Furthermore, the presence of phenolic compounds and flavonoids contributes to the plant's antioxidant capacity, potentially reducing oxidative stress linked to long-lasting inflammatory disorders of the reproductive tract (Shivhare et al., 2022). The identification of these specific phytochemical classes provides a preliminary scientific basis for the ethnomedicinal claims, suggesting that the therapeutic potential of *Soymida febrifuga* may stem from synergistic interactions between its constituent compounds rather than a single active ingredient. Specifically, qualitative screenings of various extracts have detected the presence of tannins, quinones, and flavonoids, while alkaloids and saponins were notably absent in the tested samples (Raghavan et al., 2007). The detection of tannins and flavonoids is particularly relevant, as these compounds are known to possess astringent and antimicrobial properties that could directly address the underlying microbial causes of vaginal discharge (Jha & Hussain, 2025; Raghavan et al., 2007). Specifically, studies utilizing callus cultures have successfully isolated methyl angolensate and luteolin-7-O-glucoside from the species, with methyl angolensate demonstrating antifungal activity against *Aspergillus niger* and luteolin-7-O-glucoside exhibiting antibacterial effects against *Salmonella typhimurium* (Raghavan et al., 2007). The antibacterial activity of these terpenoid and flavonoid compounds is attributed to membrane disruption by terpenes and the chelating ability of flavones to form complexes with extracellular and soluble proteins, thereby compromising bacterial cell walls (Raghavan et al., 2007).

**Table 4:** - Qualitative Phytochemical Profile of *Soymida febrifuga* (Roxb.) A. Juss.

Sr. No.	Phytochemical Parameter	Status	Common Test Method
1.	Alkaloids	Present (+)	Dragendorff's / Mayer's Test
2.	Flavonoids	Present (+)	Shinoda Test
3.	Saponins	Present (+)	Froth Test
4.	Tannins	Present (++)	Ferric Chloride Test
5.	Phenols	Present (+)	Lead Acetate Test
6.	Glycosides	Present (+)	Keller-Killiani Test
7.	Steroids/Terpenoids	Present (+)	Salkowski / Liebermann-Burchard
8.	Carbohydrates	Present (+)	Molisch's Test
9.	Proteins & Amino Acids	Present (+)	Ninhydrin / Biuret Test
10.	Anthraquinones	Absent (-)	Borntrager's Test
11.	Cyanogenic Glycosides	Absent (-)	Grignard's Test
12.	Fixed Oils & Fats	Present (+)	Spot Test

**Table 5:** - Quantitative Phytochemical Analysis of *Soymida febrifuga* (Roxb.) A. Juss.

RESULT				
Sr. No.	Parameter	Result	Unit	Method of Analysis
1.	Moisture	49.395431	%	By Muffle furnace
2.	Total Ash	6.2217314	%	drying method, often in a hot air oven at a controlled temperature (e. g. 105 °C)
3.	Protein	0.80	% w/w	Kjeldahl method
4.	Carbohydrates	45.42	% w/w	FSSAI method
5.	Crude Fat	4.16	%	Pet Ether extraction
6.	Calories/Energy	222.34	kcal/100g	By Calculation
7.	Saponins	4.27	% w/w	By Gravimetry
8.	Total phenols	3.62	% w/w	By Spectrophotometer
9.	Alkaloids	1.58	% w/w	By Spectrophotometer
10.	Tannins	20.43	% w/w	By HPLC
11.	Glycosides	0.52	% w/w	By Spectrophotometer
12.	Steroids	0.63	% w/w	By Spectrophotometer
13.	Flavonoids	1.28	% w/w	By Spectrophotometer

#### XIV. DISCUSSION: -

The results of this study correspond with wider ethnobotanical research, which demonstrates a notable inclination towards traditional medicine among rural communities, influenced by aspects such as cultural familiarity, perceived effectiveness and the psychological satisfaction associated with using local remedies (Assefa et al., 2010; Rubio & Alarcón, 2023). The phytochemical and nutritional composition of the sample, especially its remarkably high tannin concentration (20.43%) and saponin levels (4.27%), offers a solid scientific justification for its traditional application in treating leucorrhoea. In ethnopharmacological studies, leucorrhoea is frequently addressed with "Kashaya" (a decoction made from bark); for instance, the bark of *Symplocos racemosa* (Lodhra), recognized as a benchmark in Ayurvedic gynecology, is valued for its notable tannin and alkaloid (loturine) content, which provide anti-inflammatory and uterine tonic effects. Research findings reveal a notable presence of tannins. The results indicate a tannin concentration that significantly exceeds that found in many polyherbal formulations, such as "Sidabiyai" (which has around 9.3% tannins), suggesting that the sample may exhibit enhanced protein-precipitating and hemostatic characteristics essential for alleviating excessive vaginal discharge. Additionally, while typical uterine tonics like *Asparagus racemosus* (Shatavari) mainly rely on steroidal saponins for hormone regulation, the sample's combination of high tannins and moderate alkaloids (1.58%) implies a dual action: an antimicrobial effect against prevalent pathogens like *Candida albicans*, alongside a physical astringent impact that "dries" the mucosal lining. This powerful synergy of bioactive compounds, bolstered by a significant total ash content (6.22%)—which signifies a mineral-rich foundation often found in effective uterine sedatives—positions this plant as a strong candidate for clinical use in reproductive health.

#### XV. COMPARISON WITH EXISTING LITERATURE: -

The high degree of informant consensus observed in this study regarding the use of *\*Soymida febrifuga\** for gynecological disorders is consistent with quantitative ethnobotanical investigations conducted in other regions, where gynecological ailments frequently demonstrate the highest Informant Consensus Factor values (Ahirwar & Gupta, 2024). For instance, research conducted in Southwestern Ethiopia identified reproductive problems as a category with the highest informant consensus factor, treated by a limited number of species with high use citations (Bekele et al., 2022), while a study in Pakistan similarly recorded maximum ICF values for emmenagogue and vomiting, indicating a focused traditional knowledge base regarding gynecological health management (Jan et al., 2020). This pattern of specialized knowledge is further supported by ethnobotanical surveys in Africa, where the Euphorbiaceae family is frequently cited as a primary botanical resource for women's reproductive health issues, and specific plant families like Fabaceae are consistently utilized for gynecological problems across different geographical regions (Kumar, 2023; Njamen et al., 2013). The therapeutic application of

*\*Soymida febrifuga\** for leucorrhea is further supported by comparative ethno-gynecological studies, which document the extensive use of medicinal plants for conditions such as gonorrhoea, menstrual pain, and leucorrhea, with 59 distinct herbs utilized to treat 12 gynecological illnesses in some regions (Khadim et al., 2023). The reliance on a limited number of plant species for specific gynecological conditions, as evidenced by high Informant Consensus Factor values, suggests a well-defined mechanism of knowledge transmission within traditional communities, where empirical efficacy guides the selection of preferred remedies over others (Bozkurt, 2021; Nabatanzi et al., 2024).

#### **XVI. POTENTIAL BIOACTIVE COMPOUNDS AND MECHANISMS: -**

The therapeutic effects attributed to *\*Soymida febrifuga\** are likely mediated by its diverse phytochemical constituents, which include limonoids, flavonoids, and phenolic compounds known for their antimicrobial and anti-inflammatory properties. These bioactive agents may exert their therapeutic effects by inhibiting the growth of pathogens responsible for vaginal infections and modulating the inflammatory response associated with leucorrhea, similar to the mechanisms observed in other medicinal plants used for gynecological disorders (KK, 2015). The presence of these bioactive constituents is consistent with pharmacological research on related species, where compounds such as iso-flavonoids have demonstrated significant biological activity, supporting the validity of traditional uses across different geographical regions (Roger et al., 2016). While the specific bioactive mechanisms of *\*Soymida febrifuga\** require further pharmacological validation, the observed correlation between its phytochemical profile and traditional applications mirrors the broader trend in ethnopharmacology where plants used for women's healthcare, such as those in Southeast Asia, serve as starting points for drug development due to their documented efficacy in managing fertility, menstruation, and postpartum conditions (Boer & Cottingham, 2013).

#### **XVII. CONCLUSION: -**

This study underscores the significant role of *\*Soymida febrifuga\** in traditional healthcare practices for managing leucorrhea, highlighting the need for further biological research to develop standardized phytomedicine formulations that can effectively treat gynecological disorders (Afroze et al., 2022). Future research should prioritize the isolation and characterization of specific bioactive compounds, such as methyl angolensate and luteolin-7-O-glucoside, to establish a scientific link between traditional treatment methods and modern medical practices (Bozkurt, 2021; Raghavan et al., 2007). Such pharmacological validation is essential to bridge the gap between empirical traditional knowledge and evidence-based clinical applications, ensuring that these botanical resources can be safely integrated into mainstream healthcare systems (Boer & Cottingham, 2013). To achieve this integration, policymakers and healthcare providers must foster collaborative frameworks that recognize the cultural significance of traditional remedies while subjecting them to rigorous scientific evaluation and standardization protocols (Beressa et al., 2024; Chance et al., 2025). These efforts should include comprehensive toxicological assessments to verify the safety of botanical drugs on hepatic and renal functions, as well as quantitative analyses of specific bioactive secondary metabolites to ensure product stability and efficacy (Fazmiya et al., 2024; Khadim et al., 2023). Ultimately, such collaborative initiatives are crucial for integrating traditional knowledge with modern evidence-based medicine, thereby ensuring the well-being of women through validated and standardized therapeutic options (Sharaibi et al., 2024). Future investigations should employ advanced bioinformatics tools and machine learning algorithms to predict the interactions and pharmacokinetic properties of these bioactive compounds, thereby facilitating the development of optimized phytomedicines (Mottaghipisheh et al., 2024). Additionally, establishing robust links between traditional medical practitioners, researchers, and pharmaceutical companies will enhance the sharing of knowledge necessary for new drug development (Tugume et al., 2019).

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**XIX. CONFLICT OF DIFFERENCE: -**

The authors declare that there are no conflicts of interest.

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