RESEARCH PAPER

De Novo Rasa Characterization of the *Anukta Dravya Parthenium hysterophorus L.:* A *Rasanirdharana* Study by the Classical *Nipata* Method

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ABSTRACT
Rasa (taste), one of the five *Rasapanchaka* attributes of a *Dravya* (*Rasa, Guna, Veerya, Vipaka*, and *Prabhava*), is the only attribute directly perceivable through the gustatory senses without instrumentation, and is classically considered indicative of a substance's probable pharmacological action. *Parthenium hysterophorus* L. (Asteraceae), a widely naturalized weed generally regarded as invasive to India, is not described in the classical Ayurvedic Nighantus and is therefore an *Anukta Dravya* whose *Rasa* has not previously been ascertained, despite a growing body of research reporting genuine therapeutic potential for this plant. This study evaluated the *Rasa* of whole-plant powder of *P. hysterophorus* collected at the flowering stage (PHF-A) and without flowering (PH-B), by *Rasanirdharana* using the classical *Nipata* (direct taste-perception) method. Thirty healthy volunteers assessed both samples using a structured two-part proforma comprising 28 *Lakshana* drawn from Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, and Ashtanga Sangraha, followed by direct identification of the perceived *Rasa* and *Anurasa*. *Tikta* (bitter) *Rasa* was identified as the *Pradhana* (predominant) *Rasa* of both samples by both the *Lakshana*-based assessment and direct perception, but with markedly greater intensity in PH-B (56% absolute perception; 96.67% direct reporting) than PHF-A (31.33%; 70%). *Amla* and *Lavana Rasa* emerged as *Anurasa* (secondary taste) in both samples- *Lavana* relatively more prominent in PHF-A and *Amla* in PH-B- and *Tikta* was additionally identified as the *Anurasa* of both samples by direct perception. These findings establish, for the first time, a Rasa profile for *P. hysterophorus*, dominated by *Tikta Rasa* with a quantitatively distinct *Amla-Lavana* secondary character that differs between its flowering and non-flowering stages, offering an Ayurveda-consistent basis for further pharmacodynamic and phytochemical correlation of this ethnomedicinally relevant but classically unenumerated plant.

KEYWORDS: *Parthenium hysterophorus*, *Rasanirdharana*, *Nipata* method, *Tikta Rasa*, *Anukta Dravya*, *Rasa Panchaka*, Ayurvedic pharmacology

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INTRODUCTION

The foundational principles of Ayurvedic pharmacology — *Rasa* (taste), *Guna* (qualities), *Veerya* (potency), *Vipaka* (post-digestive effect), and *Prabhava* (unique or otherwise inexplicable properties), together termed the *Rasapanchaka* — serve as the framework for elucidating the therapeutic action of every *Dravya* (substance).[1] Of these, *Rasa* stands out as the only attribute that directly engages the gustatory senses without requiring instrumentation.[1,2] According to Ayurvedic doctrine, there are six primary *Rasas*: *Madhura* (sweet), *Amla* (sour), *Lavana* (salty), *Katu* (pungent), *Tikta* (bitter), and *Kashaya* (astringent). It should be noted that "taste" is only an approximate translation of Rasa in this context, since the concept encompasses a complex interplay of physiological and psychological processes that together constitute a holistic sensory experience when a substance is introduced into the oral cavity.[2] The defining characteristics (*Lakshana*) of each *Rasa* are meticulously documented in classical Ayurvedic texts, with three to five (and in some descriptions, more) specific attributes delineated for every taste.[3-6] While certain *Lakshana* are unique to individual *Rasas*, others overlap across *Rasas*, which can complicate objective evaluation; moreover, most substances exhibit more than one *Rasa*. The *Panchabhautika* (five proto-elemental) composition of a substance can be inferred from its *Rasa*, which in turn aids in determining its further properties, such as the *Guna, Veerya*, and *Vipaka*.

In the latter part of the 20th century, efforts were initiated to establish objective methodologies for *Rasa* evaluation. Prof. C. Dwarakanath pioneered the use of taste threshold experiments to identify and quantify the intensity of tastes in Ayurvedic formulations.[7] Building upon this, Prof. S.C. Dhyani conducted extensive taste threshold

assessments on 150 widely recognized Ayurvedic raw drugs, cataloguing their *Rasas* and corresponding intensities.[8] Separately, the quantification of phytochemical constituents in plants has been employed as a marker-based approach to assess taste intensities, particularly in the food industry.

Previous research has underscored the significance of *Rasa* in drug identification, pharmacological action, and the discovery of novel therapeutics, underscoring the need to systematically investigate underutilized ethnomedicinal plants with diverse traditional uses, evaluate their efficacy through scientific approaches, and integrate them into mainstream Ayurvedic practice following thorough validation.[9] This is of particular relevance for plants such as *Parthenium hysterophorus* L. that are not described in the classical Ayurvedic Nighantus and are accordingly termed *Anukta Dravya*. Since *Rasa* is the only *Rasapanchaka* attribute directly perceivable without instrumentation, its assessment offers a practical and classically valid starting point for characterizing an *Anukta Dravya*, and for inferring its probable *Guna, Veerya*, and *Vipaka*.[10]

Parthenium hysterophorus L., belonging to family Asteraceae, commonly known as carrot grass, congress grass, or gajar ghas, is a fast-spreading annual weed of the family Asteraceae that has naturalized widely and is generally regarded as invasive and noxious. Over recent years, however, a growing body of research has reported various therapeutic and biological activities for this plant, indicating that a species long dismissed purely as a harmful weed also carries genuine research and therapeutic value.[11] Despite this, its *Rasapanchaka*- and specifically its *Rasa*- has not previously been assessed in accordance with the principles of Ayurvedic pharmacology, to the best of our knowledge. Structured-proforma *Rasanirdharana* by the *Nipata* method has previously been used to characterize the *Rasa* of other non-classical and extra-pharmacopeial drugs in healthy volunteers.[9] The present study accordingly applied this method to ascertain and compare the *Rasa* profile of *P. hysterophorus* whole-plant powder collected at the flowering stage (PHF-A) and without flowering, at the vegetative stage (PH-B).

MATERIALS AND METHODS

Materials

PHF-A — Whole-plant powder of *P. hysterophorus* with flowering.

PH-B — Whole-plant powder of *P. hysterophorus* without flowering.

Collection of *Parthenium hysterophorus* Linn., growing naturally was performed from a single natural population at Jamnagar, Gujarat (22.4707°N, 70.0577°E) in late *Grishma Ritu* (July 2023) and *Sharad Ritu* (Sep 2023) where, multiple whole plants at both phenological stage were collected and pooled to obtain a homogeneous composite sample. All material was collected from the same site to minimize environmental confounders. No protected or endangered species were collected. *Parthenium hysterophorus* Linn. (Asteraceae) was authenticated at the Department of Pharmacognosy, ITRA Pharmacy, Jamnagar, with voucher number ITRA-Pharmacy/ Pharmacognosy/2023-2024/138. A voucher specimen was deposited in the herbarium for future reference. Whole plants were collected at two phenological stages: before flowering and during flowering. "Flowering stage" was defined as plants exhibiting fully open capitula across the majority of branches, and "pre-flowering" was defined as vegetative growth with no visible capitula. Plant material was cleaned of debris, shade-dried, coarsely powdered, sieved, and coded (PHF-A, PH-B) prior to the study.

Design of Proforma

A specifically structured two-part proforma for standardizing the method of *Rasanirdharana* (taste determination) was adopted from previous research work.[12] The first part was formulated based on the *Rasa Lakshana* (characteristics of taste) described in the Charaka Samhita,[3], Sushruta Samhita,[4], Ashtanga Hridaya,[5], and Ashtanga Sangraha.[6] It included subjective sensory attributes perceived immediately upon placing the drug on the tongue, together with local reflex actions involving the tongue, buccal cavity, and the nasal and throat regions, organized into 28 *Lakshana* in total: 4, 8, 4, 3, 5, and 4 individual characteristics corresponding to *Madhura, Amla, Lavana, Katu, Tikta*, and *Kashaya Rasa*, respectively (Table 1). The second part of the proforma facilitated direct identification of the *Rasa* and *Anurasa* (secondary taste) perceived by each volunteer.

Inclusion of Volunteers

Thirty healthy volunteers of either gender, familiar with the perception of *Shad Rasa* (the six tastes), were included in the *Rasanirdharana* study. Participants were selected from among Ayurveda postgraduate and Ph.D. scholars of ITRA, Jamnagar, within the age group of 21–50 years. Individuals presenting with conditions such as stomatitis, acute rhinitis, or impaired taste perception, or with habits such as smoking or the chewing of pan masala or tobacco- any of which could interfere with taste perception- were excluded from the study.

Dose and Administration of Test Drugs

Each volunteer received approximately 0.5 g of the powdered test sample during the trial. The sample was placed on the protruded tongue of the volunteer to facilitate immediate sensory perception.

Method

The Rasa of the drug was determined through direct taste perception (*Nipata*) on the tongue.[10]

Prior to assessment, all volunteers were instructed to abstain from food for at least 2–3 hours to maintain optimal gustatory sensitivity. The proforma and its format were explained in detail before the procedure, and participants were asked to rinse their mouths thoroughly with water to ensure proper cleansing of the oral cavity. Each volunteer was then provided with test samples of unknown (blind-coded) identity and instructed to record the sensations and signs experienced immediately after tasting by marking the relevant features in Part I of the proforma. In Part II, volunteers directly recorded the *Rasa* and *Anurasa* perceived, allowing comparison between the *Lakshana*- based observations and the volunteer's own direct report.

Data Assessment

The data obtained were systematically tabulated and the percentage of volunteers reporting each individual *Lakshana* was computed (Table 2). Because the number of *Lakshana* assigned to each *Rasa* in the proforma is unequal, which could otherwise bias a *Rasa* with more Lakshana toward appearing more frequently reported, the percentage of absolute *Rasa perception* for each *Rasa* was additionally calculated as: %Absolute *Rasa* perception = (Sum of the percentages reported for that *Rasa's* individual *Lakshana*) ÷ (Number of *Lakshana* attributed to that *Rasa* in the proforma) (Table 3). A *Rasa* with an absolute perception of more than 30% was considered the *Pradhana* (predominant) *Rasa* of the sample, while a *Rasa* perceived between 15% and 30% was categorized as an *Anurasa* (secondary taste) of the sample. Direct responses on *Rasa* and *Anurasa* from Part II of the proforma were tabulated separately as percentages of the 30 volunteers (Table 4), and the overall *Rasa* and *Anurasa* ascertained for each sample by both parts of the proforma are summarized in Table 5.

RESULTS

Thirty volunteers completed the *Rasanirdharana* proforma for both PHF-A and PH-B. Characteristics corresponding to all six *Rasa*- *Madhura*, *Amla, Lavana, Katu, Tikta,* and *Kashaya*- were reported for both samples, with the perceived intensity of individual *Lakshana* varying between the two (Table 2).

Table 1: Proforma structure — number of *Lakshana* per Rasa (Part I)

Rasa	**No. of *Lakshana* in proforma**
Madhura	4
Amla	8
Lavana	4
Katu	3
Tikta	5
Kashaya	4
Total	28

Table 2: Number and percentage of *Rasa* characteristics perceived by the volunteers (n= 30)

S. N.	***Lakshana (Sanskrit;* English*)***	**Attributed *Rasa***	**PHF-A No.**	**PHF-A %**	**PH-B No.**	**PH-B %**
1	*Vaktram anulimpati* (besmears the mouth)	*Madhura*	8	26.67	8	26.67
2	*Ghrana-mukha-kantha-oshtha-jihva-prahladano* (soothing to nose, mouth, throat, lips, tongue)	*Madhura*	1	3.33	3	10
3	*Paritoshamutpadayati* (induces pleasant feeling)	*Madhura*	4	13.33	0	0
4	*Shleshmanam chabhivardhayati* (increases Kapha)	*Madhura*	2	6.67	3	10
5	*Asyam asravayati* (abundant salivation)	*Amla*	13	43.33	11	36.67
6	*Kshalayati mukham* (cleanses the mouth)	*Amla*	20	66.67	8	26.67
7	*Danta harshayati* (tingling sensation of teeth)	*Amla*	3	10	0	0
8	*Roma harshayati* (piloerection	*Amla*	1	3.33	9	30

	)					
9	*Akshibhruvam sankochayati* (shrinking of eyebrows/eyelids)	*Amla*	1	3.33	9	30
10	*Jihva udvejayati* (stimulates the tongue)	*Amla*	11	36.67	12	40
11	*Mano bodhayati* (awakens mind)	*Amla*	3	10	15	50
12	*Ura: kantham vidahati* (burning in chest and throat)	*Amla*	2	6.67	0	0
13	*Kapha-prasekam janayati* (produces salivation)	*Lavana*	17	56.67	12	40
14	*Kantha-kapolam vidahati* (burning in buccal cavity/throat)	*Lavana*	1	3.33	0	0
15	*Bhakta ruchim utpadayati* (induces relish for food)	*Lavana*	3	10	2	6.67
16	*Mardavam chapadayati* (produces softness in mouth)	*Lavana*	14	46.67	7	23.33
17	*Mukha-akshi-nasa asravayati* (watering from mouth, eyes, nose)	*Katu*	1	3.33	2	10
18	*Jihvagram kurvan chimichimam* (burning sensation over tongue)	*Katu*	0	0	1	3.33
19	*Vidahati deham* (burning sensation in the body)	*Katu*	0	0	0	0
20	*Arochishnu* (distasteful)	*Tikta*	13	43.33	26	86.67
21	*Rasanam pratihanti* (temporary loss of taste perception)	*Tikta*	2	6.67	23	76.67
22	*Mukha-vaishadyam janayati* (removes sliminess of mouth)	*Tikta*	16	53.33	14	46.67
23	*Gale choshamutpadayati* (sucking sensation at throat)	*Tikta*	2	6.67	13	43.33
24	*Vishodhayati kantham* (clears the throat)	*Tikta*	14	46.67	9	30
25	*Jihva stambhayati* (stiffness of tongue)	*Kashaya*	3	10	3	10
26	*Vaktram parishoshayati* (dryness of mouth)	*Kashaya*	5	16.67	7	23.33
27	*Kantha vibandhakrt* (choking feeling in throat)	*Kashaya*	3	10	7	23.33
28	*Pidayati hridayam* (discomfort at region of heart)	*Kashaya*	0	0	1	3.33

Among the volunteers, 26.67% each for PHF-A and PH-B experienced the *Madhura* characteristic of besmearing of the mouth, while 3.33% and 10%

respectively perceived a soothing effect on the sense organs. A pleasant sensation was reported by 13.33% of volunteers for PHF-A, with no such response for PH-B. For *Amla Rasa*, abundant salivation was reported by 43.33% (PHF-A) and 36.67% (PH-B), and cleansing of the mouth by 66.67% and 26.67% respectively; piloerection and constriction of the eyebrows/eyelids were more prominent in PH-B (30% each) than PHF-A (3.33% each). For *Lavana Rasa*, salivation was reported by 56.67% (PHF-A) and 40% (PH-B), and softness in the mouth by 46.67% and 23.33% respectively. *Katu Rasa* characteristics were reported only sparsely in both samples. *Tikta Rasa* was the most prominently perceived attribute overall: distastefulness was reported by 43.33% of PHF-A volunteers versus 86.67% of PH-B volunteers, and temporary loss of taste perception by 6.67% versus 76.67%- both markedly higher in PH-B. *Kashaya Rasa* characteristics such as dryness of mouth and choking sensation in the throat were also reported somewhat more often in PH-B than PHF-A.

Because the number of *Lakshana* assigned to each *Rasa* in the proforma is unequal, a greater number of *Lakshana* for a given *Rasa* could otherwise bias it toward appearing more frequently reported. The percentage of absolute *Rasa* perception was therefore calculated for each *Rasa* to correct for this imbalance (Table 3).

Table 3: Result of absolute *Rasa* perception

Rasa	**No. of *Lakshana* (denominator)**	**PHF-A sum (%)**	**PHF-A absolute *Rasa* perception (%)**	**PH-B sum (%)**	**PH-B absolute *Rasa* perception (%)**
Madhura	4	50	12.5	46.67	11.67
Amla	8	180	22.5	213.34	26.67
Lavana	4	116.67	29.17	70	17.5
Katu	3	3.33	1.11	13.33	4.44
Tikta	5	156.67	31.33	280	56
Kashaya	4	36.67	9.17	59.99	14.99

When absolute *Rasa* perception was calculated, the highest percentage of volunteers reported *Tikta Rasa* for Sample PHF-A (31.33%- crossing the 30% *Pradhana Rasa* threshold), followed by *Lavana Rasa* (29.17%) and *Amla Rasa* (22.5%), both within the 15-30% *Anurasa* band, and *Madhura* (12.5%), *Kashaya* (9.17%), and *Katu* (1.11%), all below the *Anurasa* threshold. Sample PH-B likewise showed the highest percentage of perception for *Tikta Rasa*, at a substantially higher magnitude (56%), followed by *Amla* (26.67%) and *Lavana* (17.5%), both again within the 15-30% *Anurasa* band; *Kashaya* (14.99%) fell just short of this band, and *Madhura* (11.67%) and *Katu* (4.44%) remained below it (Figure 1). Accordingly, applying the pre-defined classification, *Tikta* is the *Pradhana Rasa* of both PHF-A and PH-B, with *Amla* and *Lavana* as *Anurasa* in both samples, *Lavana* being the more prominent of the two in PHF-A and *Amla* the more prominent in PH-B.

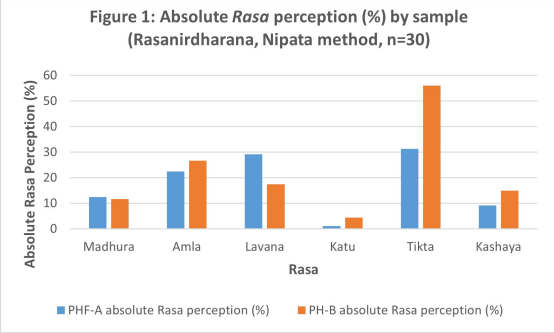


Figure 1: Absolute *Rasa* perception (%)

Table 4: Results of direct perception of *Rasa* and *Anurasa* (Part II of proforma)

Rasa	**PHF-A *Rasa* N [%]**	**PHF-A *Anurasa* N [%]**	**PH-B *Rasa* N [%]**	**PH-B *Anurasa* N [%]**
Madhura (sweet)	5 [16.67]	7 [23.33]	0 [0]	0 [0]
Amla (sour)	0 [0]	4 [13.33]	0 [0]	0 [0]
Lavana (salt)	5 [16.67]	4 [13.33]	0 [0]	0 [0]
Katu (pungent)	0 [0]	0 [0]	0 [0]	0 [0]
Tikta (bitter)	21 [70]	11 [36.67]	29 [96.67]	14 [46.67]
Kashaya (astringent)	9 [30]	1 [3.33]	1 [3.33]	6 [20]

In Part II of the proforma, volunteers directly reported the *Rasa* they perceived on tasting each sample. For PHF-A, 70% of volunteers reported *Tikta Rasa* and 30% *Kashaya Rasa*, followed by *Madhura* and *Lavana Rasa* while *36.67*% reported

Tikta as *Anurasa*. For PH-B, an overwhelming majority (96.67%) reported *Tikta Rasa*, with 46.67% reporting *Tikta* as *Anurasa* (Figure 2). The direct perception of *Katu Rasa* was negligible relative to the other *Rasa* in both samples and can accordingly be considered neither a *Rasa* nor an *Anurasa* of either sample.

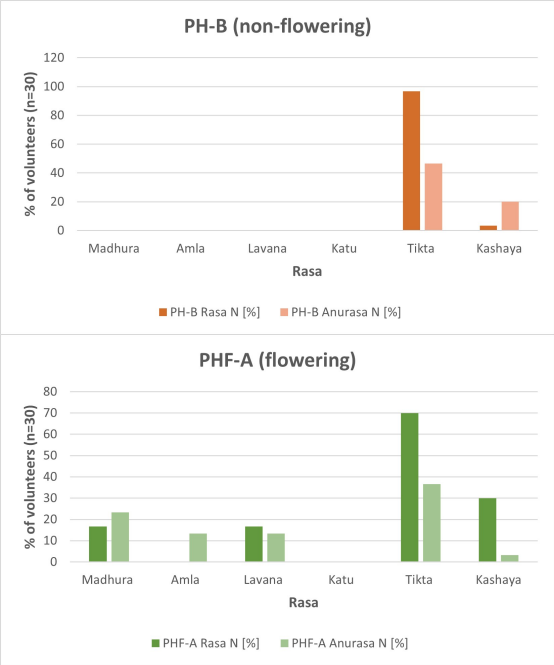


Figure 2: Direct perception of *Rasa* and *Anurasa* (Part II of proforma) for PHF-A and PH-B.

Table 5: *Rasa* ascertained to the samples as per the proforma

Sample	***Pradhana Rasa*** **(Part I)**	***Anurasa*** **(Part I)**	***Rasa*** **(Part II, direct)**	***Anurasa*** **(Part II, direct)**
PHF-A	*Tikta*	*Lavana, Amla*	*Tikta*	*Tikta*
PH-B	*Tikta*	*Amla, Lavana*	*Tikta*	*Tikta*

DISCUSSION

The *Rasanirdharana* study of *P. hysterophorus* (PHF-A and PH-B), conducted using the classical *Nipata* method, provided a structured sensory-pharmacological evaluation of the drug, enabling correlation of Ayurvedic *Rasa* attributes with reported phytochemical and biological activities of the plant. Since this plant is not described in classical Ayurvedic texts, this study establishes a de novo *Rasa* profile for it within the Ayurvedic framework — a first step toward its pharmacodynamic characterization as an *Anukta Dravya*.

The observations from both the *Lakshana*-based assessment (Part I) and direct *Rasa* perception (Part II) consistently indicate *Tikta Rasa* as the *Pradhana* (predominant) taste in both PHF-A and PH-B, with a markedly higher expression in PH-B (56% absolute perception; 96.67% direct reporting) than PHF-A (31.33%; 70%). *Tikta Rasa* is classically described to possess *Krimighna* (anthelmintic), *Kushthaghna* (anti-dermatosis), *Kandughna* (anti-pruritic), and *Lekhana* (scraping) properties, acting principally through *Kapha-Pitta Shamana* and *Rasa-Rakta Shodhana* mechanisms, thereby suggesting a pharmacodynamic correlation between the ascertained Rasa and its biological effects.[13] Flavonoids, phenolic acids, sesquiterpene lactones, and alkaloids- like bitter classes of compounds are well known to contribute to bitter-taste perception and to exhibit antimicrobial and antiparasitic activity through mechanisms such as membrane disruption, enzyme inhibition, and oxidative-stress induction.[14,15]

PHF-A demonstrated a comparatively more mixed *Rasa* profile, with *Tikta Rasa* (31.33%) followed closely by *Lavana Rasa* (29.17%) and *Amla Rasa* (22.5%), as evidenced by *Lakshana* such as salivation, mouth-cleansing, and softening effects (Table 2, Table 3). *Lavana Rasa* is classically associated with *Sukshma* and *Vyavayi* properties that facilitate deeper tissue penetration and absorption of active principles, which may plausibly contribute to improved bioavailability of phytoconstituents at the flowering stage.[16] These findings suggest that PHF-A possesses a comparatively more pharmacodynamically diverse *Rasa* profile than PH-B. The relatively higher expression of *Amla Rasa* in PH-B (26.67%) and of *Kashaya Rasa* in PH-B (14.99%, versus 9.17% in PHF-A)- the latter indicated by *Lakshana* such as dryness of mouth and throat constriction- is also notable: *Kashaya Rasa* is classically associated with *Stambhana* (styptic), *Ropana* (healing), and *Shoshana* (drying) actions, which are particularly relevant to dermatological conditions and microbial infections.[13] *Katu Rasa* was negligible in both samples, indicating a minimal contribution of pungent constituents to the overall taste profile.

The direct Rasa perception recorded in Part II of the proforma corroborates the *Lakshana*-based assessment, with *Tikta Rasa* identified as both the predominant *Rasa* and the *Anurasa* in both samples (Table 4, Table 5). *Tikta Rasa* is classically held to be predominantly composed of *Akasha* and *Vayu Mahabhuta*, whose predominance is said to explain characteristic actions such as *Shoshana*, *Lekhana*, and *Sukshma-Marga-Anupravesha* (penetration into minute channels) — actions of plausible relevance to microbial and parasitic conditions.[17]

From a modern physiological perspective, bitter principles are frequently associated with bioactive phytoconstituents such as alkaloids, flavonoids, phenolics, and terpenoids, which are known to exhibit antimicrobial, antiparasitic, antioxidant, and anti-inflammatory activity. Activation of bitter-taste

receptors (T2Rs) has additionally been shown to modulate innate immune responses and enhance antimicrobial defence mechanisms in epithelial tissues, including the skin.[18-20] Integrating the *Rasanirdharana* findings of this study suggests that the *Tikta*-dominant profile of *P. hysterophorus*- rich in the phenolic, flavonoid, terpenoid, and alkaloidal constituents reported for this species- may mediate multi-target pharmacological action, consistent with the Ayurvedic concept of *Rasa-Guna-Veerya-Vipaka-Prabhava* synergy, in which *Rasa* serves as a primary, readily accessible indicator of a substance's therapeutic potential.

Overall, this *Rasanirdharana* study establishes *Tikta Rasa* as the principal gustatory attribute of *P. hysterophorus*, with a quantitatively distinct *Amla-Lavana-Madhura* secondary profile that differs between its flowering and non-flowering stages, and offers a preliminary, classically grounded bridge between Ayurvedic pharmacology and the plant's reported modern phytochemical and biological findings. This is, to our knowledge, the first *Rasanirdharana* characterization of *P. hysterophorus*, and demonstrates that sensory-based Ayurvedic evaluation of this *Anukta Dravya* is broadly consistent with its reported phytochemical composition, reinforcing the relevance of *Rasanirdharana* in contemporary drug standardization and validation.

CONCLUSION

Rasanirdharana by the *Nipata* method, applied to whole-plant powder of *Parthenium hysterophorus* L. at the flowering (PHF-A) and non-flowering (PH-B) stages, ascertained *Tikta* as the *Pradhana Rasa* of both samples, with markedly greater intensity in PH-B, and *Amla* and *Lavana* as *Anurasa* in both samples, differing in relative prominence between the two phenological stages. *Tikta* was further confirmed as the *Anurasa* of both samples by direct perception, corroborating the *Lakshana*-based findings. As *Rasa* is classically held to be indicative of a substance's probable pharmacological action, this *Tikta*-dominant profile, together with its *Amla-Lavana* secondary character, provides an Ayurveda-consistent rationale for probable antimicrobial, antiparasitic, and other bioactivities reported for this plant, and establishes a de-novo *Rasa* profile for a hitherto classically *Anukta Dravya*. The comparatively more diverse *Rasa* profile of PHF-A and the more intensely singular *Tikta* character of PH-B further suggest that *Rasanirdharana* can detect a phenological-stage-dependent shift in taste that may parallel underlying phytochemical variation. Correlation of this *Rasa* profile with quantitative phytochemical analysis and with specific pharmacological assays across both phenological stages is recommended to validate and extend these findings, and to further establish *Rasanirdharana* as a practical, classically grounded tool for the preliminary pharmacodynamic screening of *Anukta Dravyas*.

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