RESEARCH PAPER

Pharmaceutico-Analytical Evaluation of *Nayopayama Khanda* (Granules): A Modified Form of *Kashaya* with Stability Insights

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ABSTRACT

Background:

Classical *Ayurvedic* texts describe *Panchavidha Kashaya Kalpana* as an effective therapeutic approach, yet *Kashaya* formulations often face limitations, such as large doses, poor palatability, and short shelf life. *Nayopayama Kashaya*, traditionally used in respiratory disorders like *Tamaka Shwasa*, is clinically valuable but not always convenient for regular use. Converting it into a more stable and acceptable dosage form is therefore worth exploring.

Objective:

To modify *Nayopayama Khanda* (Granules) from the classical *Nayopayama Kashaya* and evaluate its pharmaceutical standardization and accelerated stability.

Materials and Methods:

Nayopayama Kashaya was prepared as per the standard classical procedure, and later converted into *Khanda* (granules) using *Khanda Sharkara*. Parameters like organoleptic, physicochemical, phytochemical, and TLC profiling were assessed. Stability was assessed under accelerated conditions (40°C ± 2°C, 75% ± 5% RH) for 6 months as per ICH Q1A (R2) guidelines, with observations at 0^{th}, 3^{rd}, and 6^{th} months.

Results:

The modification to *Khanda* improved palatability, reduced the dose (96 ml *Kashaya* ≈ 5.2 g granules), and enhanced stability. Physicochemical parameters remained within acceptable limits, with low moisture content (≈2.3%) supporting longer shelf life. TLC profiles showed consistent Rf values with no degradation over time. Microbial load stayed well within permissible limits. No significant changes were observed in organoleptic or analytical parameters throughout the study.

Conclusion:

Nayopayama Khanda offers a more practical and stable alternative to the traditional *Kashaya* without compromising its therapeutic integrity. The formulation remained stable under accelerated conditions for six months, indicating good shelf life, better patient compliance, and suitability for contemporary *Ayurvedic* practice.

Keywords: Accelerated Stability Study, *Khanda Kalpana*, *Nayopayama Kashaya*, Pharmaceutical Standardization.

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INTRODUCTION

Ayurveda is one of the Indian medicinal systems, having various references for the treatment of Respiratory disorders. There are many formulations and lifestyle procedures mentioned for its regulations and treatment. *Nayopayama Kashaya* (NK) (Vaidyanath R, Nishteshwar K., 2008) is one of the polyherbal formulations extensively used for all respiratory ailments (*shwasa vikara*), especially for bronchial asthma (*tamaka shwasa*). It is a very good bronchodilator and carminative in action. The same formulation was also mentioned in *Vaidya Manorama* for *Vatasamana* (pacification of vata), and for *swasa* (breathlessness) and *hikka* (hiccough) as per *Arogyaraksha Kalpadruma* (Neethu et al., 2021).

Although widely used, *Kashaya* preparation is time-consuming and has a short shelf life of only 24 hours (Yogaratnakar, 1955). Its poor palatability further makes it inconvenient for patients to prepare fresh and consume regularly for therapeutic purposes. Additionally, its liquid form makes it difficult to carry and use during travel. Therefore, there is a need to develop a more patient-friendly dosage form with an extended shelf life, while preserving the fundamental pharmaceutical principles of *Ayurveda*.

Among the various formulations described in *Ayurveda*, *Avaleha Kalpana* is one of the commonly used preparations. Further processing *Avaleha* produces *Khanda Kalpana* into a solid granular form, which has benefits including lower chance of microbial contamination, improved stability and longer shelf life (approximately one year) (Angadi R., 2014), palatability, lower dosage, enhanced bioavailability, and lastly, the packaging and shipping of *Khanda* (Granules) are comparatively easier for solid dosage forms than liquid dosage forms (Paneliya et al., 2013).

Thus, to achieve a therapeutically effective and pharmaceutically stable product, it is essential to ensure both the authenticity of raw materials and the precision of pharmaceutical processing techniques. The present study focuses on the standardization and stability evaluation of *Nayopayama Khanda*, developed from the classical *Nayopayama Kashaya*, to enhance its acceptability and therapeutic utility in contemporary practice.

MATERIALS & METHODS

- Raw Drugs were procured and authenticated from GMP-certified KLE Ayurveda Pharmacy, Khasbag, Belagavi.
- Khanda Sharkara was collected from the local market, Belagavi.
- Pharmaceutical study was carried out from the PG Department of Rasashastra & Bhaishajya Kalpana, KAHER's Shri B. M. Kankanawadi Ayurveda Mahavidyalaya, Belagavi, Karnataka.

METHODOLOGY

Ingredients of *Nayopayama Kashaya* are tabulated in Table 1 (Bhavamisra, 2012)

Table No. 1: Ingredients of *Nayopayama Kashaya*

SN	Ingredients	Botanical Name	Part Used	Ratio	Quantity
1	*Bala*	*Sida cordifolia* Linn.	Root	10 Part	1 Kg
2	*Jeeraka*	*Cuminum cyminum* Linn.	Fruit	2 Part	200 g
3	*Shunthi*	*Zingiber officinale* Roscoe.	Dried Rhizome	2 Part	200 g

Preparation of *Nayopayama Kashaya*:

Kashaya was prepared according to the standard procedure as per the *Sarangadhara Samhita* (Sarngadharacharya P, Sharangadhara A. 2013). All the drugs of *Nayopayama Kashaya* were collected and subjected to pulverization, and the coarse powder was then sieved through a mesh size #40. Coarsely powdered *Bala* (1kg), *Jeeraka* (200gm) and *Shunthi* (200gm) were mixed and placed in a sanitized stainless-steel container and soaked overnight in 10 litres of water. The next day, the soaked mixture was transferred to a gas stove and heated on *Mandagni* (mild heat). Additional water was added to make the total volume 12,400 ml. The preparation was then boiled gently until it reduced to $1/4^{th}$ of its original volume (5,600 ml). Once the liquid was reduced to $1/4^{th}$ of its original volume, it was filtered using a fresh cotton cloth. The remaining *Kashaya* was then used for the preparation of *Ghana*.

Preparation of *Nayopayama Kashaya Ghana* by hot air oven (Hiremath S. G., 2011)**:**

A total of 5600 ml of *Nayopayama Kashaya* was taken & subjected to mild heat for further boiling. Reduction was carried out under continuous stirring up to the semisolid stage without covering the mouth of the vessel. When the desired consistency was achieved, the vessel was taken out of the gas stove. Then took a tray, lined it with plastic so it would come out easily, and spread the *Ghana* over it. Then it was placed in a hot air oven at 60°C until it dried, and after that, it was taken out and triturated in a *Khalwa Yantra* into a powder.

Preparation of *Nayopayama Khanda* (Granules) (Shastri P, 2018)**:**

Equal parts (4 parts) of water & *Khanda Sharkara* were taken in a stainless-steel vessel, boiled & stirred over a mild fire (90-95°C), continued till *Paka-Siddhi Lakshana* (Chief desired characteristics) were obtained. The vessel was taken out of the gas stove after 3-4 threads of consistency, and kept for cooling. Then, previously prepared *Nayopayama Kashaya Ghana* (1 Part) was added with thorough stirring, little by little, to get a homogenous blend. The blended mass was passed through a #10 sieve to obtain granules and kept for drying at room temperature. Then dried granules were weighed & packed.

Dose Fixation:

As per the *Sharangadhara Samhita*, the standard dose of *Kashaya* is 2 *Pala* (i.e., 96 ml) (Tripathi, 2024). Taking this as the reference, 96 ml of *Kashaya* and the same method were used to prepare *Khanda*. On completion of the procedure, the final yield obtained was about 5.2 g of *Nayopayama Khanda*.

Thin-layer chromatography (TLC) study:

About 1 ml of the sample was mixed with 10 ml of toluene and left undisturbed for 12 hrs. The mixture was then filtered, and the filtrate was used for TLC profiling (API, 2006).

Mobile phase - Toluene: ethyl acetate: Formic acid (7:3:0.1)

Stationary phase - Silica gel G.

Visualization - Under visible light and ultraviolet light (at 254 nm).

Packaging of *Nayopayama Khanda* (Granules):

- Nayopayama Khanda in granule form was made available in sachet form.
- It was placed and stored under hygienic conditions in a room intended for that purpose.

Storage conditions and evaluation parameters:

An accelerated stability study was conducted in accordance with ICH Q1A (R2) guidelines (API, 2016).

The storage conditions for the accelerated stability study were specified as:

- Temperature: 40°C ± 2
- Relative Humidity (RH): 75% ± 5

The changes were observed over 6 months, with accelerated stability assessed at the 0^{th}, 3^{rd}, and 6^{th} months.

The following parameters were considered for the evaluation of the stability study:

- Organoleptic characters such as colour, odour, and taste.
- pH, LOD, Total Ash, Total Insoluble Ash, Moisture Content, Bulk Density, Microbial Load, and TLC Profile.

OBSERVATIONS AND RESULTS

For Kashaya preparation, one part of the mixture was boiled with 16 parts of water at 90-95°C over *Mandagni* (Mild heat) and reduced to $1/4^{th}$ over about 5 hrs. Care was taken to maintain controlled temperature, avoid overheating, and ensure continuous stirring to prevent charring and contamination. The final Kashay was dark brown with a characteristic odour, indicating proper extraction.

During the preparation of *Nayopayama Khanda*, it is observed that water becomes brownish in colour after dissolving the *Khanda Sharkara* (sugar), and it was filtered because it has physical impurities in it. While pouring fine powders of herbal drugs into sugar syrup, it should be continuously stirred to avoid the formation of lumps. An important step in the pharmaceutical procedure of *Khanda Kalpana* is that a four-thread consistency of sugar syrup was prepared to obtain the desired characteristics of granules; otherwise, the final product will be in a semisolid consistency. This preparation becomes solid due to the heat of crystallization of sugar. In addition, the final product tasted sweet and slightly bitter, attributed to *Jeeraka* and *Shunthi*

Paka-Siddhi Lakshana **(**Angadi R, 2024)**:** During the procedure of *Khanda* (Granules), the temperature was maintained between 90°C and 95°C and observed *Darvipralepa* (Ladle Coating) at 93°C, *Tantumatvama* (Thread Consistency) at 94°C, *Apsumajjanama* (Sink in water) at 94°C and *Sthiratvama* (Stable) at 95°C. The average yield was found to be 544 gm. It took 1.5 hr to complete the preparation of *Khanda* (Granules).

The present work, the formulation and evaluation of *Nayopayama Kashaya* and *Nayopayama Khanda* (Granules), aimed to formulate a dosage form using *Nayopayama Kashaya* as the base (active pharmaceutical ingredient [API]), with the hope of minimising inconveniences and increasing patient acceptability and compliance. The Final quantity obtained of processed *Nayopayama Kashaya* and *Nayopayama Khanda* (Granules) as tabulated in Tables 2 and in Figs. 1-3.

Table No. 2: Preparation of *Nayopayama Kashaya, Nayopayama Kashaya Ghana* by Hot Air Oven, and *Nayopayama Khanda* (Granules)

SN	Particulars	Result Obtained		
		Nayopayama Kashaya	***Nayopayama Kashaya Ghana***	***Nayopayama Khanda* (Granules)**
1	Initial Weight	1,400 gm	5,600 ml	115 gm (1 Part)
2	Volume of water	22,400 ml	-	460 ml (4 part)
3	Quantity of *Khanda Sharkara*	-	-	460 gm (4 part)
4	Reduction Part	$1/4^{th}$	-	-
5	Obtained the yield quantity	5,600 ml	115 gm	544 gm

6	Average temp. during process	90-95°C	60°C	90-95°C
7	Total Duration of the process	5 hrs	3 hrs	1.5 hrs

All the samples of Raw Drugs, *Nayopayama Kashaya*, and *Nayopayama Khanda* (Granules) were subjected to various physicochemical parameters, and all showed good results, as tabulated in Table 3. The TLC profiling highlights the comparable Rf values in *Kashaya* and *Khanda*, along with consistent 7 spots across 0^{th}, 3^{rd}, and 6^{th} months, as tabulated in Table 3-4, and in Fig 4-5. Phytochemical screening of all raw drugs, *Nayopayama Kashaya* and *Nayopayama Khanda* (Granules), was performed, and all showed positive results for the various phytochemical constituents, as tabulated in Table 3. A stability study of *Nayopayama Khanda* was performed under accelerated conditions by storing samples of the prepared dosage forms for 6 months. During the stability study, various physicochemical parameters were performed. After the comparison between the observed values, there was no significant variation found, as tabulated in Table 4.

Figure No. 1: Preparation of *Nayopayama Kashaya*

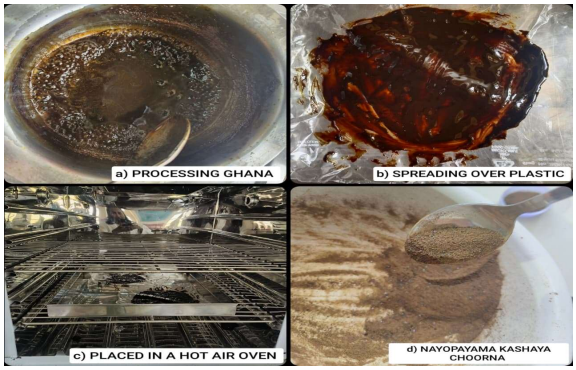

Figure No. 2: Preparation of *Nayopayama Kashaya Ghana*

Figure No. 3: Preparation of *Nayopayama Khanda*

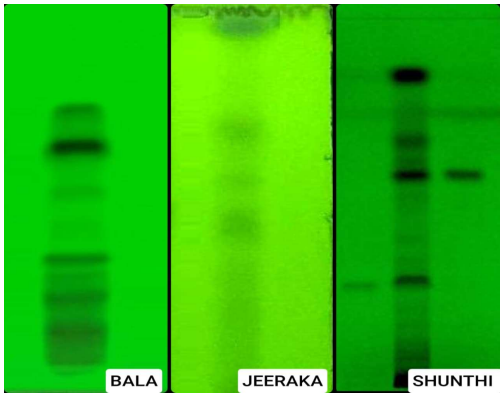

Figure No. 4: TLC Profiling of Raw Drug

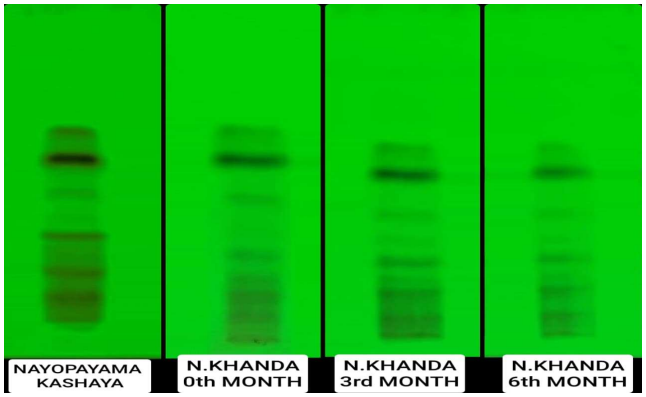

Figure No. 5: TLC Profiling of *Nayopayama Kashaya* & *Khanda*

Table No. 3: Analytical Parameters

SN	**Parameters**	***Bala***	***Jeeraka***	***Shunthi***	***Nayopayama Kashaya***	***Nayopayama Khanda* (Granules)**
1	Colour	Greenish Brown	Brown with light coloured ridges	Buff Coloured	Brown	Brownish Black
2	Odour	Not Specific	Umbliferous Characteristics	Agreeable Aromatic	Aromatic	Smoky
3	Taste	Not Specific	Richly Spicy	Agreeable & Pungent	Bitter	Sweet
4	Foreign Matter (%)	Under Limits	Under Limits	Under Limits	-	-
5	LOD (%)	-	-	-	-	2.7
6	Total Ash (%)	2.5	6.45	3.20	-	5.2
7	Acid Insoluble Ash (%)	0.65	0.92	0.75	-	0.75
8	Aqueous Extractive (%)	10	22.50	11.75	-	-
9	Alcohol Extractive (%)	4.50	12.50	11.75	-	-
10	Specific Gravity	-	-	-	1.010	-
11	pH Value (%)	-	-	-	6.46	7.5
12	Total Solids (%w/w)	-	-	-	4.725	-
13	Moisture Content (%)	7.2	6	7.2	-	2.3
14	TLC Profile (Toluene: Ethyl Acetate: Formic Acid, 7:3:0.1)	(6 Spots) 0.20, 0.32, 0.51, 0.62, 0.76, 0.82	(4 Spots) 0.47, 0.66, 0.77, 0.92	(4 Spots) 0.10, 0.35, 0.82, 0.87	(6 Spots) 0.10, 0.25, 0.32, 0.50, 0.66, 0.76	(7 Spots) 0.14, 0.27, 0.32, 0.45, 0.50, 0.66, 0.77
15	**Preliminary Phytochemical Analysis**					
	Alkaloids (Wagner reagent test)	+ve	+ve	+ve	+ve	+ve
	Flavonoids (Shinoda test)	+ve	+ve	+ve	+ve	+ve
	Tannins (5% $FeCl_3$ test)	+ve	+ve	-ve	+ve	+ve

	Steroids (Libermann-Burchard test)	-ve	-ve	-ve	-ve	-ve
	Saponins (Foam test)	+ve	-ve	+ve	-ve	+ve
	Terpenoids (Salkowski test)	-ve	+ve	+ve	-	+ve
	Glycoside (Keller-Killiani test)	+ve	+ve	+ve	+ve	+ve
	Carbohydrates (Benedict test)	+ve	+ve	+ve	+ve	+ve
	Reducing Sugar	-	-	-	+ve	+ve
	Non-reducing Sugar	-	-	-	+ve	+ve

Table No. 4: Stability Study results of *Nayopayama Khanda* (Granules)

SN	Parameters	0th Month	3rd Month	6th Month
1	Colour	Brownish Black	Brownish Black	Brownish Black
2	Odour	Smoky	Smoky	Smoky
3	Taste	Sweet	Sweet	Sweet
4	LOD (%)	2.7	2.7	2.5
5	pH	7.5	7.5	7.5
6	Total Ash (%)	5.2	5.1	5.1
7	Acid Insoluble Ash	0.75	0.70	0.70
8	Moisture Content (%)	2.3	2.20	2.10
9	Bulk Density (gm/ml)	0.70	0.70	0.70
10	Microbial Load (CFU/gm)	20	18	18
11	TLC Profile (Toluene: Ethyl Acetate: Formic Acid, 7:3:0.1)	(7 Spots) 0.14, 0.27, 0.32, 0.45, 0.50, 0.66, 0.77 No band disappeared/ No secondary band appeared	(7 Spots) 0.14, 0.27, 0.32, 0.45, 0.50, 0.66, 0.77 No band disappeared/ No secondary band appeared	(7 Spots) 0.14, 0.27, 0.32, 0.45, 0.50, 0.66, 0.77 No band disappeared/ No secondary band appeared

The estimation of the nutritional value of *Nayopayama Khanda* (Granules) are as follows:

The nutritional value of the originally prepared *Kashaya*, which was prepared using herbal drugs, was not analysed due to the low concentration of solids present in it. Hence, the granules which were prepared from the same *Kashaya* were directly analysed for its nutritional values as there was an addition of *Khanda Sharkara* (Sugar) in it for modification so that it can reflects it major nutritional constituents than *Kashaya*, as tabulated in Table No.5.

Table No. 5: Estimation of Nutritional Value of *Nayopayama Khanda* (Granules)

Sr No.	Tests	Units	Values
1	Total Energy	Kcal/100 g	19
2	Proteins	gm	2
3	Fat	gm	0.17
4	Carbohydrates	gm	3.2
5	Calcium	mg/100gm	21
6	Iron	mg/100gm	1.2
7	Magnesium	mg/100gm	2
8	Phosphorus	mg/100gm	24
9	Potassium	mg/100gm	32
10	Sodium	mg/100gm	32
11	Zinc	mg/100gm	0.55
12	Copper	mg/100gm	1.9

DISCUSSION

Khanda Kalpana is one of the important *Upakalpana*, which is highly palatable. It is considered a variant of

Avaleha Kalpana. The preparation, like *Khanda Kalpana*, apart from the palatability, having other beneficial aspects (Reddy, K.R. 2008). These preparations have comparatively longer shelf life, mainly due to less moisture and the presence of *Khanda Sharkara* (sugar) (Shastri, B. 2010).

In an analytical study, results showed that the organoleptic evaluation effectively establishes the identity and quality of the drug. The observed modification from *Kashaya* to *Khanda* reflects proper pharmaceutical processing, resulting in improved palatability, dose uniformity, and overall formulation standardization.

The physicochemical analysis confirms that all raw drugs (*Bala*, *Jeeraka*, *Shunthi*) comply with API Limits, indicating their purity and suitability for formulation. The pH conventionally represents the acidity or alkalinity. The *Kashaya* shows an appropriate pH (6.46) and specific gravity (1.010%), while conversion to Khanda improves physicochemical stability, as reflected by reduced moisture content (2.3%) and a slightly alkaline pH (7.5). These changes indicate improved physicochemical stability of the final product and may contribute to enhanced shelf life and patient acceptability.

Ash value depends on the total inorganic substances present in a particular drug; this parameter is important in quality control and the standardisation of drugs. The higher the inorganic substances present in drugs, the higher will be the ash value (Mukharjee P.K., 2002). Here, the ash value of all the raw drugs was within the permissible limit. The ash value of the granules was 5.2%. Loss on drying was recorded at 2.7% in *Nayopayama Khanda* (granules). This indicates that the moisture content of *Khanda* (granules) is less. This is indicative of the chances for a longer shelf life of *Nayopayama Khanda* (granules).

The TLC profiling comparison highlights the preservation of phytoconstituents during pharmaceutical processing. The presence of similar Rf values in *Kashaya* and *Khanda*, along with consistent 7 spots across 0^{th}, 3^{rd}, and 6^{th} months, indicates that the key phytoconstituents were retained during processing and no degradation or loss of activity occurred over time.

Qualitative tests are used to assess the presence of functional groups, which are essential to the expression of biological activity. The present study reveals that alkaloids, flavonoids, glycosides, and carbohydrates were consistently present in all the samples, indicating their potential contribution to therapeutic activity. Tannins were present in all samples except *Shunthi*, while steroids were absent in all samples. Saponins showed variability, present in *Bala*, *Shunthi* and *Nayopayama Khanda*, but absent in *Jeeraka* and *Nayopayama Kashaya*, suggesting minor compositional differences due to processing. Both *Nayopayama Kashaya* and *Nayopayama Khanda* showed positive results for reducing and non-reducing sugars, indicating the presence of carbohydrate constituents, which may be derived from the herbal ingredients and pharmaceutical processing of the formulations.

Overall, the findings suggest that the conversion of *Kashaya* into *Khanda* results in a formulation that is not only stable but also more practical from a pharmaceutical and patient-use perspective. The analytical parameters remained within acceptable limits, supporting the quality and consistency of the formulation.

Stability and Shelf Life

The stability of an Ayurvedic formulation is critical to ensure its safety, efficacy, and quality throughout its shelf life. In the present study, *Nayopayama Khanda* (Granules) was subjected to a stability protocol over a period of six months under accelerated storage conditions of temperature 40°C ± 2 and 75% ± 5 relative humidity (RH), evaluating organoleptic, physicochemical, phytochemical, and microbiological parameters.

No significant changes were observed in organoleptic characters and microbial load after a six-month accelerated study. Environmental elements, including temperature, humidity and light, cause *Nayopayama Khanda* quality to change over time. Over the course of the anticipated shelf-life and six months of storage, the stability study identified the organoleptic, physicochemical, Phytochemical and Chromatographic, and microbiological aspects of the finished product. Up to six months, the accelerated stability data demonstrated very good stability.

Organoleptic and Physical Evaluation:

The organoleptic characteristics, including the brownish-black colour, smoky odour, and sweet taste, remained unchanged throughout the study duration. The persistence of the 'smoky' odour suggests that the volatile principles and aromatic compounds inherent in the formulation are well-preserved, while the stable 'sweet' taste indicates no fermentation of the sugar-based (*Khanda*) matrix.

The Loss on Drying (LOD) and Moisture Content showed a negligible downward trend (from 2.3% to 2.1% for moisture). Maintaining moisture levels below 5% is a significant factor in preventing the hydrolysis of active glycosides and inhibiting the growth of opportunistic microorganisms. Furthermore, the Bulk Density remained constant at 0.70 (gm/ml), suggesting that the granules maintain their physical integrity and flow properties, which is vital for dosage uniformity.

Physicochemical Integrity:

The pH value remained stable at 7.5, indicating a neutral-to-slightly alkaline nature that did not fluctuate. Stability in pH is often a surrogate marker for the absence of chemical degradation, as many decomposition reactions (such as the oxidation of polyphenols) result in a shift toward acidity. The Total Ash (5.1%) and Acid Insoluble Ash (0.70) values remained within limits, confirming that there was no external contamination or leaching from the packaging material during the storage period.

Phytochemical and Chromatographic:

The chemical stability was further substantiated by Thin Layer Chromatography (TLC) profiling. The observation that (Over 6 months) 'no band disappeared, and no secondary band appeared' is highly significant. In herbal drug technology, the disappearance of bands indicates the degradation of marker compounds, while the appearance of new bands signifies the formation of degradation products or artefacts. The consistency of the TLC fingerprint indicates that the complex secondary metabolites of the ingredients in *Nayopayama Khanda* are chemically robust under the tested storage conditions.

Microbiological Safety:

The Microbial Load was found to be exceptionally low, ranging from 20 CFU/gm at the initial month (0^{th} Day) to 18 CFU/gm at the 3^{rd} and 6^{th} months, which is within the permissible limits. This suggests that the processing conditions were proper hygienic norms followed during the preparation of the formulation and packing.

A well-designed stability protocol typically considers factors such as batch selection, sample characteristics, analytical methods, acceptance criteria, storage conditions, testing intervals, sampling plans, container-closure systems, and suitable stability testing approaches. In *Ayurvedic* classics, the concept of '*Saviryata Avadhi'* refers to the period during which a drug retains its potency above a certain level; beyond this, the efficacy may gradually decline, though not completely, if stored properly (Jena, R. et al., 2024). In the present study, *Nayopayama Khanda* remained stable under accelerated conditions for up to six months, with only minimal variation in physicochemical and phytochemical parameters, suggesting good stability.

The adoption of modern packaging and storage technologies by *Ayurvedic* industries necessitates a reassessment of stability periods based on scientific studies. This study found that *Nayopayama Khanda* remained stable under accelerated conditions for up to 6 months, with minimal changes in physicochemical and phytochemical parameters, indicating improved stability and shelf life.

LIMITATIONS

- **Therapeutic:** Loss of heat-sensitive constituents and volatile components during prolonged heating.
- **Dietary:** High sugar content; not suitable for diabetic and obese patients.
- **Physical:** Hygroscopic nature leads to moisture absorption and lump formation.
- **Pharmacokinetic:** Slower absorption compared to liquid formulations (*Kashaya*).
- **Pharmaceutical:** Requires careful storage to prevent microbial contamination.
- **Economic:** Complex and energy-intensive preparation increases production cost.

CONCLUSION

The *Nayopayama Kashaya* was successfully developed into *Nayopayama Khanda* (Granules) without altering the Classical principles. The Qualitative and Quantitative analyses of *Kashaya* and *Khanda* (Granules) showed the presence of reducing and non-reducing sugar, alkaloids, flavonoids, tannins, glycosides, and carbohydrate phytochemicals, even after modification.

Nayopayama Khanda (Granules) demonstrated good stability under accelerated conditions for six months, with no significant changes observed in the evaluated parameters.

SCOPE FOR FURTHER STUDY

- In-Vitro & In-Vivo study of *Nayopayama Khanda* (Granules).
- Clinical Evaluation of *Nayopayama Khanda* in *Hikka* and *Shwasa*

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