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Herbal Harmony: Preparation & Evaluation of Organic Tea Blends

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ABSTRACT

The health benefits of herbal tea are numerous. Tisanes, another name for herbal teas, have gained a lot of popularity because of its many natural qualities and health advantages. A ubiquitous and significant beverage during social and cultural events is tea. It promotes cell generation, immunity, and vitality maintenance. The beverage known as "herbal tea" is prepared with herbs, spices, and medicinal plants. It is consumed worldwide due to its therapeutic and restorative properties, which eliminate the need for caffeine. You can buy these loose or in tea bags. A whole amount of water can be used to decoct herbal tea. Herbal tea contains a variety of naturally occurring bioactive compounds, including terpenoids, alkaloids, coumarins, carotenoids, flavonoids, and saponins. The mixture made from the roots, leaves, fruits, and flowers is called herbal tea. The most widely consumed herbal tea contains haritaki, ginger, lemon, honey, and cinnamon. Drinking herbal tea may provide a number of health advantages, including anti-inflammatory, calming, and antioxidant effects. The production and evaluation of herbal teas are examined in this study, which also looks at the thoughtful blending of medicinal herbs to create beneficial and healthful beverages.

KEY WORDS: Shankapushpi petals, Zinger, Cinnamon, Black pepper, Indian gooseberry, herbal tea, evaluation.

1. INTRODUCTION:

The primary goal of the research comprises identifying and characterizing active phytochemicals from natural sources, figuring out the components' structure and activity, and assessing any possible therapeutic benefits. Schmidt, an Austrian physician, coined the term "pharmacognosy" in 1811, and Seydler followed suit in 1815 with his work Analecta Pharmacognostica.

Herbal tea is commonly referred to as tisane. Tisane is made from a mixture of dried leaves, seeds, nuts, fruits, flowers, barks, and other materials. It is the most widely consumed beverage. It is a supplement to current medicine and has numerous biological qualities [1]. Herbal tea, which also treats urinary tract infections, is made by infusing several herbs with hot water [2]. There are several types of herbal teas available. They can stop anaemia from happening. To avoid various ailments, the majority of individuals use plant-based medications. In general, herbal tea increases immunity and reduces worry, tension, and exhaustion. The plant materials have various medicinal qualities [3, 4].

People have been encouraged to drink tea because of its many health benefits, which include lowering the risk of cardiovascular diseases and many cancers. Additionally, the bone's mineral density has improved and has anti-fibrotic and neuroprotective qualities. It is excellent for dental health. lowering blood pressure, managing body weight, and generating antimicrobial action. People have been encouraged to drink tea because of its many health benefits, which include lowering the risk of cardiovascular diseases and many cancers. Additionally, the bone's mineral density has improved and has anti-fibrotic and neuroprotective qualities. It is excellent for dental health. lowering blood pressure, managing body weight, and generating antimicrobial action [5]. Compared to other drinks like coffee and real tea, herbal tea is very different.

Herbal teas are consuming worldwide due to their numerous therapeutic and restorative properties [6]. It was discovered that herbal teas contain around 4000 bioactive components, of which polyphenols make up around one-third. The other compounds are flavonoids and tannins. Their immune-boosting and curative qualities make them a good substitute for traditional medicine [7]. In addition to its delightful flavour and aroma, tea is prized for its important and refined cultural function in many cultures. Growing consumer knowledge of the health advantages of tea intake has resulted in a resurgence of interest in the beverage [8].

Herbal teas are popular because of their invigorating qualities, which promote relaxation. They strengthen the immune system and give the body cleansing qualities that are related to stomach and digestive issues [9]. When the herbal teas were consumed, no negative effects were seen. The two methods used to produce herbal teas are infusion and decoction. Teas made from herbs have strong therapeutic qualities. (10) Various sorts of plants are utilized to make different kinds of herbal teas. Depending on the plant and its potency, several preparation techniques are used [11].

The use of herbal tea is gradually growing every day. Since herbal teas are now available to treat chronic ailments, many old recipes are still employed. Ginger tea helps maintain a healthy digestive system and is mostly used to treat digestive issues [12-14]. Drinking herbal teas has been linked to the prevention and treatment of a number of illnesses, including cough, diarrhoea, and dysentery. Because of its scent, which may be added to a variety of pharmaceutical items, cinnamon is primarily employed in the essence industries were observed [15-16].

These herbal beverages may raise antioxidant levels and help shield people from oxidative harm when they are a part of a balanced diet. As herbal tea consumption increased, the herbal industry expanded and has since helped treat a wide range of illnesses [17-19]. Herbal teas are frequently offered for sale as loose, crushed goods. frequently packaged in tea bags, which makes it difficult to determine their botanical origin only by looking at them. Antioxidants help prevent age-related issues as well as promote health [20-22].

1. HERBS, CHEMICALS, GLASSWARE AND REAGENTS:

1.1. Herbal materials: Shankapushpi flowers and rose petals were collected from garden and shade dried and powdered. Cinnamon powder (Pure Tree foods, Mumbai, Maharashtra), Ginger powder (Crista farm fresh, Idukki, Kerala), Amla powder (Khadi Omorose, Biosur Pharma, Sidguwan, Sagar, Madhya Pradesh), Black pepper powder (Everest masala, Chembur, Mumbai, Maharashtra), Lemon peel powder (Orea farm, Jaipur, Rajasthan), Haritaki powder (Diet Organics, Korattur, Chennai, Tamil Nadu)

1.2. Chemicals and reagents: Analytical grade chemicals and reagents, including Picric acid, Ferric chloride, Sodium hydroxide, Hydrochloric acid, Sulphur acid, Chloroform, Gelatin, Sodium chloride. These were obtained from Finar Scientific Chemicals, Mumbai, Maharashtra.

1.3. Instruments: Hot air oven (Temp. star India, Ambala, Hayana), Eddy's hot plate (Temp. star India, Ambala, Hayana), Desiccator (Thermo Fisher Scientific, Hyderabad), Microscope (Olympus, Haryana, India)

1.4. Glass ware: Test tubes, Funnel, Measuring cylinder, Glass rod, Glass slide, Petri dish, Spatula, China dish, Mortar and pestle.

2. Herbal tea ingredients morphology and its importance:

2.1. Shankapushpi:

Synonym: Vishnukranthi, Blue morning glory.

Convolvulus pluricaulis is a perennial plant. The branches are widely spread on the ground and long up to 30 cm. Roots are usually branched, cylindrical, ribbed having some rough stem nodules. Small roots are 1-5cm long, 0.1-04 cm thick. The colour of the root changes from brown to light brown. Stems are cylindrical with hairy nodes and internodes. Leaves are shortly petiolate linear-lanceolate, acute, hairy on both surfaces. Leaves are 10.5-2 cm long and 0.1-0.5cm broad light green in color. Flowers are white or purple. It is solitary or in pairs sessile or sub-sessile in the leaf axis Fruits are capsuled, oblong globose with coriaceous, pale brown pericarp. Seed are minutely puberulous and brown in color.

Significance: Shankapushpi consists of various constituents such as D-glucose, maltose, rhamnose, sucrose, starch and other carbohydrates and also include fatty acids, hydrocarbons, and comprise of 30.9% myristic acid, 66.8% palmtic acid and 2.3% linoleic acid, hextriacontane. Proteins and amino acids are also isolated from the plant. It has been studied that Shankapushpi has various pharmacological properties such as, Nootropic, anti-oxidant, analgesic, antiulcer and anti catatonic and anti- helminthic activity [23-24]

2.2. Cinnamon:

Synonym: Dalchini, Karuva, Lavangapattai

Cinnamon consists of the dried inner bark of the shoots of coppiced trees of Cinnamomum zeylanicum, belonging to family Lauraceae. It should not contain less than 1.0 per cent of volatile oil. Cinnamon is a crop of tropical countries. It needs sandy soils with an admixture of humus. The altitude at which it grows favourably is 800 to 1000meters.The seeds are sown in well prepared nursery beds located at suitable places in June and July. The seeds are sown at a distance of 10cm and covered with small layer of soil and watered properly. It takes approximately 20days for germination of seeds.

Significance: Cinnamon bark consists about 0.5-1.0% of volatile oil, 1.2% of tannins, mucilage, calcium oxalate, starch and sweet substance known as Mannitol also 60-70% of cinnamaldehyde, 5-10% eugenol, benzaldehyde, cuminaldehyde and also other terpenes like phellandrene, pinene, cymene, caryophyllene etc. Cinnamon is fragrant and delicious spices with high antioxidant content. It also provides antibacterial activity and may help fight throat pain and infection due to cold and cough. It has various essential oils, particularly cinnamaldehyde, have natural antimicrobial properties [25-26]

2.3. Ginger:

Synonym: Allam, Adrak, Shunti.

Ginger consists of whole or cut, dried scrapped or unscraped rhizomes of Zingiber officinale Roscoe, family Zingiberaceae. It contains not less than 0.8% of total gingerols on dried basis. Ginger needs warm humid climate and is cultivated in areas with heavy rainfall. It is cultivated even at sea level, but still it thrives best at an altitude of 1000 - 1500 m. If no sufficient rainfall is available, proper arrangements for irrigation are necessary. Sandy or clay or red loamy soils are suitable for ginger. Ginger is cultivated by sowing rhizomes in the month of June.

Significance: Ginger consists about 1-4% of volatile oil, 40-60% of starch, 10% of fat, 5% of fibre, 6 % of inorganic material, 10% residual moisture and 5-8 % of acrid resinous matter [27]. Also contain monoterpene hydrocarbons, sesquiterpene hydrocarbons, oxygenated mono and sesquiterpenes, and phenyl propanoids. Sesquiterpene hydrocarbon content is found to be includes α -zingiberene, β -bisabolene, α - farnesene, β - sesquiphellandrene and α -curcumene [28]. Phenolic ketones of oleo resins include gingerols like shogaols, zingerone, hexahydro curcumin and also o-methyl ether of these compounds [29]. Various forms of ginger are available. Ginger has been widely used as a stomachic, an aromatic, a carminative, stimulant and flavouring agent [30]. Ginger oil is used in mouth washes, beverages and liquors. Ginger powder is used effective in motion sickness [31]. It can help to stimulate digestion, reduce bloating and alleviate gastrointestinal discomfort and also has anti – inflammatory property [32-33].

2.4. Indian Gooseberry:

Synonym: Amla, Usirikaya, Amalaki

This consists of dried, as well as fresh fruits of the plant Phyllanthus emblica, belonging to family Euphorbiaceae. It contains not less than 1.0 % w/w of gallic acid. Indian gooseberry can also be propagated by budding. It does not tolerate the frost or drought. It is normally found up to an altitude of 1500m.

Significance: Indian gooseberry is a rich natural source of vitamin C (Ascorbic acid) and contains 600 - 750 mg per 100 g of the fresh pulp [34]. The fruits also contain about 0.5% fat, phyllemblin and 5% tannin. It is also rich in mineral matters like phosphorus, iron and calcium and also contain appreciable amount of pectin [35]. It has various properties such as an acrid, diuretic, refrigerant and laxative. Dried fruits are given in diarrhoea and dysentery. They are also administered in jaundice, dyspepsia and anaemia along with iron compound. Fruits are also used in preparation of inks, hair oils and shampoo. It is reported that fixed oil from fruits possesses the property of promoting hair growth. Seeds of the amla are given in treatment of asthma and bronchitis [36-38].

2.5. Black Pepper:

Synonym: Kalimirch, Kurumulaku, black peppercorn

Pepper is the dried unripe fruit of perennial climbing vine Piper nigrum Linn, family Piperaceae. It contains not less than 2.5% of pipeline on dried basis. It can be cultivated right from sea level up to an altitude of 1200 meters. Temperature variation of 10°C to 40°C is tolerated by the plant. Pepper thrives best in virgin soil rich in humus content.

Significance: Pepper contains an alkaloid piperine of 6-9%, 1-2.5% of volatile oil, 30% of pungent resin, piperidine and about 3% of Starch. The yellow color of volatile oil is due to caryophyllene. The fruits are used as aromatic, stimulant, stomachic and carminative properties. It causes feeling of warmth and used as condiment and also stimulates taste-buds, with increase in gastric juice. The oil is mainly used as spice due to pungent taste [39-40].

2.6. Lemon:

Synonym: Nimbu, nimmakaaya, nimbe

Lemon peel is the outer part of the pericarp of the ripe or nearly ripe fruits of Citrus limonia, family Rutaceae. It contains not less than 2.5% of volatile oils. The leaves are linear, sharp - edged and emit a lemony fragrance when crushed

Significance: Flavor of lemon oil is due to neral and geraniol only. Lemon peel contains 2-4% of volatile oil. The other constituents of the peels are hesperidin, pectin, calcium oxalate and bitter substances. Lemon has various properties such as carminative and stimulant and oil is used as perfuming and flavoring agent. It is also used for extraction of pectin and volatile oil. And also contains antioxidants, which may help protect cells from oxidative damage [41].

2.7. Haritaki:

Synonym: Kaukkai, Harad, Ink tree

Myrobalan contains dried, ripe and fully matured fruits of Terminalia chebula, belongs to the family Combretaceae. It contains not less than 5percent of chebulagic acid and not less than

12.5% of chebulinic acid. It is native to South Asia from India and Nepal.

Significance: It contains triterpenes, arjunglucoside I, arjungenin and the chebuloside I and II and phenols that include ellagic acid, chebulinic acid, gallic acid, ethyl gallate, punicalagin, luteolin and tannic acid. The major bio-active constituents of the fruits are Tannins, Anthraquinones, chebulinic acids, chebulic acid, ellagic acid and gallic acid. Haritaki fruit is mainly used as laxative, carminative, astringer and tonic effect. Also, as the traditional medicine by the tribes of Tamil Nadu to cure severe diseases such as fever, cough, diarrhoea, skin diseases and urinary tract infection. Used in the treatment of diuretics and cardiotonic and prevent from aging and acts as impact long immunity [42].

2.8. Rose: **Synonym**: Gulab, rosa, queen of flowers

Rosa centifolia is used as an ornamental plant throughout India, but cultivated in Grasse. It is known as the Perfume Capital in the French city. It belongs to the family Rosaceae. It is shrub and grows up to 1.5-2meters in height.

Significance: Rose contains tannins, oligomeric proantrocyanidins, saccharine matter, salt of malic acid and tartaric acid. The petals contain geraniol, linalool, nerol and benzyl alcohol. The roots of the rose are useful in intestinal ulcer, rickets, hemorrhages and diarrhea. The leaves are used in treating wounds, hepatopathy and hemorrhoids. The tea is prepared with the help of petals is used as blood purifier, vertigo and headache. Rose petals are rejuvenating and prove to be a tonic also inhibits vasoconstriction and mainly inhibits the growth of leukemia cells [43-44].

3. **Importance of ingredients used in organic tea:** The importance of each ingredient used in the preparation of herbal tea are tabulated in table no.1

Table no.:1 Importance of ingredients of herbal tea

Name of the ingredients	Biological source	Chemical constituents	Uses
Shankhpushpi	The Convolvulus pluricaulis of Leaves and flowers are used for its medicinal properties. Family: Convolvulaceae	Alkaloids, flavonoids, glycosides, phenolic acids, terpenoids, saponins, resins, volatile oils.	Enhance memory, boosts immunity, regulate menstrual cycles, treats epilepsy and constipation.
Ginger	Obtained from rhizomes of Zingiber officinale. Family: Zingiberaceae	Gingerol, shogaols, zingiberene, alpha- curcumene, zingerone.	It has anti-inflammatory, antioxidant and digestive properties. Treat motion sickness, stomach upset, boosts immune system.
Cinnamon	Obtained from the barks of Cinnamomum zeylanicum. Family: Lauraceae	Cinnamaldehyde, Cinnamic acid, Eugenol, Polyphenols and essential oils.	It has anti-oxidant, anti-inflammatory and antimicrobial properties. Used for blood sugar regulation and heart health.
Haritaki	Obtained from the mature dried fruits of Terminalia chebula. Family : Combretaceae	Anthraquinone glycosides, chebulinic acid, tannic acid and vitamin C.	Prevents diabetes, improve cognitive functioning, aids in digestion, promote weight loss.
India gooseberry	Consists of dried, as well as fresh fruits of the plant Phyllanthus emblica. Family: Euphorbiaceae	Emblicanin A and B, punigluconin, rutin and gallic acid, flavonoids.	Improves immunity, reduces the stress, treat anaemia, improve digestion, manage weight.

			It has anti-aging property.
Black Pepper	Obtained from the unripe fruit of Piper nigrum. Family: Piperaceae	Piperine (6-9%), piperidine, Caryophyllene	Used as aromatic, stimulant, stomachic, carminative. It is used as condiment.
Lemon peel	Obtained from outer part of the pericarp of the ripe or nearly ripe fruits of Citrus limonia. Family: Rutaceace	Contains neral and geraniol, peel has hesperidin, pectin, calcium oxalate and bitter substance.	Acts as carminative, stimulant and used as perfuming, flavoring agent. Contains antioxidants.
Rose	Obtained from Rosa centifolia. Family: Rosaceace. It is also known as the Perfume Capital	Contains tannins, oligomeric proantrocyanides, salt of malic acid and tartaric acid. Petal contains geraniol, nerol, benzyl alcohol.	Used as blood purifier, treatment of vertigo and headache, inhibits vasoconstriction, used as antioxidants and antitussive.

4. MATERIAL AND METHODS:

4.1. Collection of plant materials: All these herbs were collected from different sources and dried in hot air oven at 60˚C to remove the moisture.

4.2. Method of preparation: All the ingredients were slightly roasted at low temperature until free from moisture. All the ingredients were powdered separately and pass through the sieve number 85. Each ingredient was weighed for four different formulations as per the table no.2 were and mixed well in ascending order then again passed through the sieve number 44. These formulations were stored in tightly closed container, away from moisture and direct sunlight.

4.3. Evaluation and standardization methods

Standardization and evaluation are essential for determining and validating the quality, potency, purity, and authenticity of herbal extracts, raw materials, and final goods. modifying and managing the production process to guarantee a constant level of quality and potency, which will ensure that particular bioactive chemicals or markers are present in a specified quantity and that pharmacopoeial and regulatory standards are met. As per Indian Pharmacopoeia (IP), evaluation refers to the process of

assessing the quality of herbal material or preparation based on its physical, chemical, biological & microbiological characteristics ensuring purity & strength of the herbal preparation.

Various parameters to evaluate and standardize the formulations are as follows:

4.3.1. Organoleptic evaluation [1]

***4.3.1.1.*Visual inspection**: Check for color, texture, and presence of contaminants.

***4.3.1.2.*Odour evaluation**: Assess the aroma and fragrance of the churna.

***4.3.1.3.*Taste evaluation**: Evaluate the taste and flavor of the churna

4.3.2. Physical Evaluation [45-46]

Physical evaluation in herbal churna involves assessing the physical characteristics of the churna to ensure its quality, safety and efficacy. Here are some physical evaluation methods for herbal churna:

***4.3.2.1.*Particle size analysis**: Take a small amount of powder on the glass slide and spread. Press the slide with another slide. Remove the slide and tap the slide from back side for the removal of excess particles. Now place a cover slip on the slide and observe under microscope.

***4.3.2.2.*Bulk density**: The bulk density of the powder described as the ratio of mass of an untapped powder sample to its volume, including the empty spaces between particles. It is affected by both the density of the powder particles and the arrangement of the particles in the powdered bed. Bulk density is expressed in units of grams per milli litre (g/ml). The bulk density of a powder can vary depending upon various factors such as particle size, shape and how the powder is stored and packed. Even small change in the powder bed can affect its bulk density.

***4.3.2.3.*Tapped density**: To measure the tapped density, firstly record the initial volume or mass of the powder and then mechanically tap the container until the volume or mass remains relatively constant.

***4.3.2.4.*Moisture content**: It is the amount of water present in the sample of herbal tea powder. It is calculated by taking 5g of herbal tea in a petri dish and place in hot air oven. Dry the specimen to constant temperature with equal time intervals.

4.3.2.5. **Angle of repose**: Placing the material on a funnel causes it to slip down until the particles at an angle θ wear out and balance with gravity. The angle of repose is less than 40℃, indicating excellent fluidity, greater than 40℃ indicates poor.

4.3.2.6. **Ash value**: Ash values are helpful in determining the quality and purity of crude drug, especially in powder form. The target of ash vegetable drugs is to eliminate all traces of organic matters, which may otherwise interfere in an analytical purpose.

4.3.2.7. **Extractive values**: Weigh some amount of powder and add water to it. Keep it aside for 24 hrs. And filter the solution after 24hrs. Dry the particles left over on the filter paper.

4.3.3. **Chemical evaluation** [47]: Chemical evaluation refers to the systemic analysis & assessment of the chemical composition & properties of the tea powder.

4.3.3.1. **Test for carbohydrates:**

- **Molish's test** (general test): To 2-3 ml aqueous extract, add few drops of alpha naphthol solution in alcohol shake and add con. sulphuric acid from sides of the test tube. Voilet ring is formed at the junction of the two liquids.
- **Tests for reducing sugars**: Fehling's test: Mix 1 ml of Fehling's A and Fehling's B solution boil for 1 min. Add equal volume of test solution in test tube. Heat in boiling water bath for 5-10 min. First yellow, then brick red ppt is observed.
- **Benidict's test:** Mix equal volume of Benedict"s reagent and tests solution in test tube. Heat in boiling water bath for 5 min. solution appears green yellow or red depending on amount of reducing sugars present in test solution**.**

4.3.3.2. **Test for protein:**

- Biuret test (General test): To 3 ml test solution add 4% NoaH few drops of Cuso4 solution, violet or pink color appears.
- Millions test: Mix 3 ml tests solution with 5 ml reagent white .ppt warm ppt turns brick red or the ppt.

4.3.3.3. **Test for Glycosides** (Anthraquinone Glycoside)- Borntrager's test: Boil the test material with 1ml of sulphuric acid in a test tube for 5 min. Filter while hot. Cool the filtrate and

shake with equal volumes of chloroform. Separate the lower layer of chloroform and shake it with half of its volume of dilute ammonia. A rose pink to red colour is produced in the ammonical layer.

4.3.3.4. **Test for Flavonoids-**Alkaline reagent test: To the test solution add few drops of sodium hydroxide solution, intense yellow colour is formed which turns to colourless on addition of few drops of dilute acid indicates presence of flavonoids.

- Salkowski reaction: To 2 ml extract, add 2 ml chloroform and 2 ml con. Sulphuric acid Shake well. Chloroform layer appears red and acid layer shows greenish yellow fluorescence.
- Liebermann Buchard reaction: Mix 2 ml extract with chloroform. Add 1-2 ml acetic anhydride and add 2 drops of con. Sulphuric acid from the side of test tube. First red, then blue and finally green color appears.

4.3.3.5. **Test for Alkaloids -**Picrolonic acid test: To the test solution, add small amount of picric acid. It results in the formation of yellow precipitate indicates the presence of alkaloids.

4.3.3.6. **Test for phenolic compounds:** Ferric chloride test: Treat the extract with ferric chloride solution, blue color appears if hydrolysable tannins are present and green color appears if condensed tannins are present.

4.3.3.7. **Test for Volatile Oils-**Addition of a drop of ferric chloride solution to a drop of volatile oils, produces a pale green colour. With ferric chloride, Cinnamic aldehyde gives brown colour and Eugenol gives blue colour, resulting in the formation of pale green colour.

4.3.3.8. **Test for Tannins-**Gelatin test: To the test solution add 1% gelatin solution containing 10% sodium chloride. Precipitate is formed.

4.3.3.9. **PH Test-**Dissolve 1g of sample in 1ml of water. Dip the blue litmus paper into the solution and observe the colour change. Blue litmus changes to red colour indicates the presence of acid.

5. RESULT AND DISCUSSION

5.1. Methods and materials:

5.1.1. **Preparation of herbal tea powder mix:** As per the table no.2, four different formulations were calculated for 2.5 gm, prepared and packed as per the given steps below.

a) **Drying**: All the powder are dry form grinded size reduction: The crude ingredient was collected and these ingredients were size reduce using driven mixer individually.

b) **Weighing**: Next a work weight out of the ingredient for the batch for Some ingredients, only a small amount of is necessary in the batch but if a very large batch is being made, and several ingredients are needed in large amount.

c) **Mixing**: In a formula in which no pre mixing is required, after checking and weighing the ingredients are simply mix mixture. The ingredients are Completely mixed with each other.

d) **Filling**: The finished batch of tea powder formed place in the Filling area. Then the measured amount of powder on the weighing balance and packed in tea bags and sealed.

Fig: 1: Labelling and packing of tea bags

Table no.2 Formulations for polyherbal churna

s.no.	Ingredients	Quantity in grams
1.	Shankapushpi petals	0.1g
2.	Zinger	0.5g
3.	Cinnamon	0.2g
4.	Rose petals	0.1g
5.	Indian gooseberry	0.3g
6.	Haritaki	0.1g
7.	Black pepper	0.3g
8.	Lemon peel powder	0.4g
9.	Salt	0.5g

e) **Packaging**: From the filling area, the plash Container to the packaging Line. The packaging Complete and the labelling with products of the product write the full information Then the products are taken to the warehouse to await distribution.

5.2. Evaluation methods: Tea powder is evaluated and compared with standard as green tea from organic India.

5.2.1. **Organoleptic Evaluation:**

Table no.3 Comparison of organic evaluation of test and standard

Organoleptic parameters	Test	Standard (green tea organic India)
Colour	Yellowish brown	Brown
Odour	Aromatic	Aromatic
Taste	Spicy	Spicy and mild astringent
Texture	Coarse powder	Coarse powder

5.2.2. Physical evaluation:

Table no.4 Comparison of Physical evaluation of test and standard

Physical parameters	Test	Standard (green tea organic India)
Particle size	7-12µm	4-9µm
Bulk density	0.333	0.357
Tapped density	0.416	0.5
Moisture content (gm)	8%	8.5%
Angle of repose (θ)	29.161	24.844
Ash value	26.98	28.67
Extractive value (water)	6%	8%
Ph Value	Slightly acidic	Slightly acidic

5.3. Chemical evaluation:

Table no.5 Comparison of Chemical evaluation of test and standard

Name of the test	Test	Standard (green tea organic India)
Test for carbohydrates	+	+
Test for proteins	+	+
Test for glycosides	+	+
Test for flavonoids	+	+
Test for steroids & terpenoids	_	_
Test for alkaloids	+	+
Test for phenolic compounds	_	-
Test for volatile oils	+	_
Test for tannins	+	+

5.4. Conclusion:

The consumption of tea as a health drink or medicinal tea should be promoted through research and publication. This research paper provides potential benefits of Shankapushpi, Cinnamon, Ginger, Indian Gooseberry, Black pepper, Lemon, Haritaki, Rose when combined in a herbal tea. Shankapushpi is used as an immunity booster and has antiulcer, anti-oxidant and anti-helminthic activity. The prepared herbal tea is both health beneficial and suitable for consumption, containing secondary metabolites. Herbal tea with different

health benefits was successfully formulated. It shows good physiological and pharmacological properties. All the parameters of the herbal teas are been successfully evaluated. They give many health benefits. Product should be stored in cool and dry place. This herbal tea is ideal for individuals with severe illnesses or low immunity. Therefore, it can be concluded that tea helps to support immunity and promote a healthy lifestyle.

6. **DECLARATIONS OF INTEREST**: None

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