

PREPARATION & EVALUATION OF COUGH SYRUP

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ABSTRACT

The cough it is a most common problem are face by the all people. There are two types of cough one is the Dry cough and second is wet cough. The dry cough is a no mucous and secretion while in wet cough there is cough mucous or secretion. The syrup is most commonly used and popular dosage form there is used in cure the cough and cold because it having ease of patients compliance. The herbal cough syrup was formulated using crude drugs as Pudina&Tulsi or Cinnamon as a main ingredient along with Honey. Today syrup is used for treatment of May ailments and to overcome symptoms of disease. The antioxidant syrup is used to treatment the cancer because of many stress condition and other oxidative reaction in body the free radical are generated by using theses, syrup the condition is overcome. Formulation at laboratory scale was done and evaluate for number of parameters such as PH, viscosity, Density, stability testing during evaluation formulation found to be stable and ready to use in a cough treatment.It is found that Antitussive activity produced by the Herbal formulation in the minimum dose was much better than the standard drug.

I. INTRODUCTION

Herbal syrup it is a defined as a prepared and combination and concentration decoction with Honey sugar or either some time use alcohol. The base of such syrup is a strong herbal decoction and mixing a decoction with sugar honey help to thicken preserves the decoction.

1. Herbal plant and formulation are used for many types of disease like cough syrup and other disease. The cough syrup many types of herbal plant are used for pudina, Tulsi, Cinnamon, honey in that whole plant are used for making herbal medicine the many years. Herbal formulation a most commonly used a development as well as developing countries as health care. The cough syrup medication is a liquid dosage form use of oral liquid pharmaceutical has been confirm on basic ease of administration to those people who have the problem in the swallowing of solid dosage from medication. Syrup is a concentrated solution contains sugar and purified water. In syrup from the other type of syrup solutions. The syrup may be or may not be containing medication or mixed flavoring agent. When the syrup without a medication but the flavoring agent present are known as flavored or nonmedicated syrup

2. Flavored syrup are frequently used as vehicle for the unpleasant test of medications results (found as) is medicated syrups. Syrup are present in syrup in high amount predisposes then to the bacteria infection so they often. Use as preservative

3. Syrup are very prominent delivery vehicle use for the anti tissue medication because they give a more soothing to swallow (ingest)then the tablet and capsule. This medication is quickly observed. There are same available synthetic cough preparations they cause several adverse effect. So the present study was show to enlarge and in violet herbal cough syrup carry natural element having no any side effect.

4. In general health professionals having difficulties of accessing effectiveness and safety natural treatment (therapy). Number of instance allopathic medication product has not been studied in large scale and generally they solid without in knowledge of there mechanism of action or side effect. Even so the use of complementary medication is sometime helpful and the confirmation is same time helpful and the confirmation the effectiveness of some this all medication literature is limited, they frequently sold with the drug store

5. A successful formulation of liquid , as well as other dosage forms , requires a blend of scientificacuity and pharmaceutical "art" 6 . Oral liquid medicines are being superseded gradually by tablets and capsule because of deleterious changes take place more readily in solution 7 . Nevertheless there are still a large number of liquid oral preparations are available in the official books. The fact is that the absorption of medicaments in solution

from the GI tract into the systemic circulation may be expected to occur more rapidly than other oral

dosage forms of the same medicinal agent⁸. Ayurvedic formulations are preferentially administered by oral route, and most of the orally administered Ayurvedic formulations belong to liquid form of drug or drug combination. However herbal medicinal combination

Type of cough

Dry cough

Wet cough

Dry Cough

A cough is a reflex action that clears your airway of irritants and mucus. There are two types of cough: productive and nonproductive. A productive cough produces phlegm or mucus, clearing it from the lungs. A nonproductive cough, also known as a dry cough, doesn't produce phlegm or mucus. Many things — from allergies to acid reflux — can cause a dry cough. In some cases, there's no obvious cause. Regardless of the cause, an ongoing dry cough can seriously impact your day-to-day life, especially if it's worse at night. Keep reading to learn more about the possible causes of a dry cough and ways to find relief.

WET COUGH

A wet or productive cough is the opposite of a dry cough. It is a cough that brings up fluid, such as phlegm. It can be a sign of a respiratory infection, congestive heart failure, and other conditions.

Coughing is a reflex that occurs in response to irritation in the throat or lungs. It is the body's way of removing irritants such as fluid and phlegm. A wet cough occurs when fluid in the airways triggers the coughing reflex. Another name for a wet cough is a productive cough, since it produces phlegm

Classification of cough.

Depending on duration, a cough can be classified as acute, subacute, or chronic. Acute coughs last less than 3 weeks and often result from a cold or other upper respiratory tract infection such as flu, pneumonia, or whooping cough. Subacute coughs, which last between 3 and 8 weeks, are frequently the residual cough after an illness or infection has resolved. Chronic coughs, which typically last longer than 8 weeks, can be caused by medical conditions and medications.¹ A cough can further be classified as productive or nonproductive. The productive cough produces phlegm or mucus, which may have come from the lungs or the nasal sinuses. Some causes of a productive cough include viral illnesses, bacterial infection, postnasal drip, tobacco use, or the reflux of stomach acid. Nonproductive cough does not produce sputum. This may be the result of the residual effects of a viral illness or bacterial infection, bronchospasm, allergies, medications, exposure to irritants, asthma, or airway blockage.³ Children are prone to develop cough from causes specific to their age group, including croup, bronchiolitis, respiratory syncytial virus, secondhand smoke, and emotional or psychological problems (psychogenic cough).⁴

Advantages Of Herbal medicines

Herbal medicine has been used for centuries to help with a wide range of health issues. If you are the type that wants to avoid prescription medicines and invasive therapies as much as possible, then the herbal medicine approach could be right for you. At NEX Wellness, we make it our mission to provide our patients with the highest quality herbal medicine treatments for their ailments. There are many advantages of utilizing herbal medicine to help treat health issues. In this article by NEX Wellness, we share some information about a few advantages of herbal medicine.

Disadvantages Of Herbal medicines

Herbal Medicines may come with many advantages. But, it also comes with a set of disadvantages as well. For one, herbal medicines take a longer time to work compared to pharmaceutical drugs. If an individual decides to take the herbal alternative to pharmaceuticals, he or she must be very patient.

Herbal medicines are often self administered. As a result, there is no dosage or warnings specified. When Herbal medicines are consumed with pharmaceutical drugs, the two can interact with each other resulting in injuries to health.

It is also important to know that plants used as a herbal medicine may poison rather than cure someone. It may be the case where a certain part of a plant may be edible and another part may be poisonous. Take rhubarb for

example. The roots of rhubarb is used as a laxative and the stem is edible. However, its leaves are poisonous. An individual may not be able to identify a poisonous plant. This would put the individual at the risk of poisoning themselves or others.



Material Used In Herbal Cough Syrup Honey

honey, sweet, viscous liquid food, dark golden in colour, produced in the honey sacs of various bees from the nectar of flowers. Flavour and colour are determined by the flowers from which the nectar is gathered. Some of the most commercially desirable honeys are produced from clover by the domestic honeybee. The nectar is ripened into honey by inversion of the major portion of its sucrose sugar into the sugars levulose (fructose) and dextrose (glucose) and by the removal of excess moisture Honey is stored in the beehive or nest in a honeycomb, a double layer of uniform hexagonal cells constructed of beeswax (secreted by the worker bees) and propolis (a plant resin collected by the workers). Honeycomb is used in winter as food for the larvae and other members of the colony. It is commonly sold by beekeepers as a delicacy, or the wax may be extracted for various purposes. Honey contains about 18 percent water, is water soluble, and may granulate between 50 and 65 °F (10 and 18 °C). Somewhat acid, it has mild antiseptic properties and has been used in the treatment of burns and lacerations. One of the most easily assimilated foods, it is widely used in baked goods, candies, prepared fruits, cereals, and medicines. This medication is used for temporary relief of coughs without phlegm that are caused by certain infections of the air passages (such as sinusitis, common cold). This product should not usually be used for an ongoing cough from smoking or long-term breathing problems (such as chronic bronchitis, emphysema) unless directed by your doctor. This product contains dextromethorphan. It is a cough suppressant that works by decreasing the feeling of needing to cough. Cough-and-cold products have not been shown to be safe or effective in children younger than 6 years. Do not use this product to treat cold symptoms in children younger than 6 years unless specifically directed by the doctor. Ask your doctor or pharmacist for more details about using your product safely. These products do not cure or shorten the length of the common cold and may cause serious side effects. To decrease the risk for serious side effects, carefully follow all dosage directions. Do not use this product to make a child sleepy. Do not give other cough-and-cold medication that might contain the same or similar ingredients (see also Drug Interactions section). Ask the doctor or pharmacist about other ways to relieve cough and cold symptoms (such as drinking enough fluids, using a humidifier or saline nose drops/spray).

Honey Uses In Cough Syrup

Honey was almost the only source of sugar available to the ancients and was valued for its medicinal benefits. It was used to make mead, a fermented beverage, and was mixed with wine and other alcoholic drinks. In Egypt it was employed as an embalming material. In India and other Asian countries it was used to preserve fruit and make cakes, sweetmeats, and other foods. Honey is mentioned in the Bible and in the Quran. Honey for cough is a better and a cheaper treatment option than the drugs purchased from over-the-counter. Honey relieves inflammation in the throat or the lungs due to its viscous and sticky nature that helps in relieving the mucous membranes. In the case of bacterial infection, the antibacterial properties of honey ensure relief from cough. We all know that honey is a powerhouse of antioxidants which strengthens the immune systems to defend your airways from bacteria and foreign objects. Some experiments conducted on the children of age two and older with common cold and respiratory tract infections were given up to 2 teaspoons of honey before bedtime. Honey proved miraculous in reducing nighttime coughing and improving sleep. The research also proved that honey was as effective as the cough suppressant, than dextromethorphan. Thus, honey for cough cure is definitely worth it. Using honey for a cough won't get rid of it entirely, but there is some evidence that a single dose given at bedtime may suppress a cough in young children. Honey coats the throat and soothes irritated mucous membranes, calming a cough and easing related symptoms.¹ In fact, some studies suggest that honey may be

just as effective in relieving nighttime coughs in kids as the drug dextromethorphan, which is found in cough syrups like Children's Robitussin and Delsym Children's Cough Suppressant. Honey is a time-honored remedy to treat sore throats and coughs in kids and adults. It can be given by the teaspoon or swirled into a cup of tea or warm lemon water. This article explains if honey for coughs is the right choice for your child, what the research says, and why it must be avoided in children under 1 year of age.



Tulsi



Scientific classification of tulsi:

Kingdom : plantae

Division : magnoliophyta

Class : Magnoliopsida

Order : Lameness

Genus : Ocimum

Species : O.tonuiflorum

Bionomical name : ocimum tenuifloram/Ocimum sanctum

Nepali name : Tulsi

Ocimum sanctum commonly known as holy basil or Tulsi. Tulsi consist of fresh and dried leaves of ocimum sanctum belonging to family Lamiaceae. Tulsi is an aromatic perennial plant.tulsi known for its detoxifying purifying and antimicrobial properties.tulsi helps to protect your hands by killing 99.99%of germs.Tulsi now,days cultivated commercially for its volatile oil. it is much branched small herb 30 to 75cm in height. All parts of tulsi are used in medicine especially fresh and dried leaves.leaves are ablong acute with entire sterolate margins pubescent on both sides and minutely gland dotted.The leaves are green in colour with aromatic flavors and slightly compressed. Seeds are reddish black and subglobose. The leaf is dorsiventral stomach are of dicyclic type. Particularly abundant on lower surface.

Tulsi Use In cough syrup

Tulsi cough syrup is a genuine herbal cough syrup made from very gentle Ayurvedic herbs. It is an excellent soothing aid in both dry and productive cough. It stimulates melting and then clearance of thickend mucous from airways thereby gives prompt relief in difficult breathing. It quickly reduces throat irritation and calms dry coughing. It is completely a safe and natural anti-cough formula for long term use for all age groups.

It is an effective Decongestant and Expectorant which reduces phlegm. A potent immune modulator especially for children It is useful in relieving Common cold and Cough.

Camphene, cineole and eugenol present in Tulsi help reduce cold and congestion in the chest. Juice of Tulsi

leaves mixed with honey and ginger is effective in bronchitis, asthma, influenza, cough and cold.

Ginger



Ginger, the "root" or the rhizome, of the plant *Zingiber officinale*, has been a popular spice and herbal medicine for thousands of years. It has a long history of use in Asian, Indian, and Arabic herbal traditions. In China, for example, ginger has been used to help digestion and treat stomach upset, diarrhea, and nausea for more than 2,000 years. Ginger has also been used to help treat arthritis, colic, diarrhea, and heart conditions.

Medicinal Uses and Indications

Today, health care professionals may recommend ginger to help prevent or treat nausea and vomiting from motion sickness, pregnancy, and cancer chemotherapy. It is also used to treat mild stomach upset, to reduce pain of osteoarthritis, and may even be used in heart disease. Ginger products are made from fresh or dried ginger root, or from steam distillation of the oil in the root. You can find ginger extracts, tinctures, capsules, and oils. You can also buy fresh ginger root and make a tea. Ginger is a common cooking spice and can be found in a variety of foods and drinks, including ginger bread, ginger snaps, ginger sticks, and ginger ale. Ginger is a member of a plant family that includes cardamom and turmeric. Its spicy aroma is mainly due to presence of ketones, especially the gingerols, which appear to be the primary component of ginger studied in much of the health-related scientific research. The rhizome, which is the horizontal stem from which the roots grow, is the main portion of ginger that is consumed. Most countries and jurisdictions have a licensing body whose duty is to determine whether to approve a drug for a specific indication, based on the relative safety of the drug and its efficacy for the particular use. In the United States, indications for medications are regulated by the Food and Drug Administration (FDA), and are included in the package insert under the phrase "Indications and Usage". The European Medicines Agency (EMA) holds this responsibility for centrally authorized drugs in the European Union.



Ginger Use In Cough Syrup

Ginger juice has anti-inflammatory effects. You cough when you have a sore throat or bronchitis. This inflammation can be the result of your body's immune response to an infection or an irritant, like postnasal drip. The anti-inflammatory effect of ginger can relieve a cough or sore throat by reducing inflammation. Research shows that ginger can do this by blocking inflammatory proteins in the body. These proteins cause pain, itching, and burning in the throat due to inflammation.

Additionally, research in two different studies shows that ginger helps relieve tonsil pain and sore throats, and relieves coughs when combined with other herbs. In one study, 7 out of 10 participants with chronic tonsillitis saw a reduction in symptoms of acute tonsillitis. Other research was done in lab tubes, but with promising results. Ginger Boosts Immune System. Ginger can soothe coughs and sore throats and improve your recovery time due to its compounds that can boost immunity.

Most coughs caused by sore throats are caused by viruses. This includes the common cold, flu, and mononucleosis. Cold medicine can't kill viruses, but ginger can.

A laboratory study shows that ginger stimulates the immune system to destroy viruses. These results suggest that ginger has the potential to reduce the incidence of sore throats, relieve symptoms more quickly, and improve recovery time. Ginger protects you against pathogens and toxins. Ginger can help relieve coughs caused by sore throats by protecting you against bacteria, pathogens, and toxins. These are called bacteria. Some of these bacteria cause sore throats. This includes pharyngitis caused by the bacteria *Streptococcus pyogenes*.

One study compared the effectiveness of ginger extract versus antibiotics on bacteria that cause strep. As part of the study, ginger was extracted in varying amounts from the roots and leaves of the plant, and diluted with water or ethanol.

The juice from leaves and roots has the same inhibitory effect on bacteria and is equivalent to antibiotics. Ethanol-based solvents are more effective than water-based solvents. These studies were all done in vitro. More research is needed to understand the antibacterial effects of ginger in humans



Turmeric



Turmeric, a plant in the ginger family, is native to Southeast Asia and is grown commercially in that region, primarily in India. Its rhizome (underground stem) is used as a culinary spice and traditional medicine. Historically, turmeric was used in Ayurveda and other traditional Indian medical systems, as well as Eastern Asian medical systems such as traditional Chinese medicine. In India, it was traditionally used for disorders of the skin, upper respiratory tract, joints, and digestive system.

Today, turmeric is promoted as a dietary supplement for a variety of conditions, including arthritis, digestive disorders, respiratory infections, allergies, liver disease, depression, and many others. Turmeric is a common spice and a major ingredient in curry powder. Curcumin is a major component of turmeric, and the activities of turmeric are commonly attributed to curcuminoids (curcumin and closely related substances). Curcumin gives turmeric its yellow color. Turmeric dietary supplements are made from the dried rhizome and typically contain a mixture of curcuminoids. Turmeric is also made into a paste for skin conditions.

Natural plant products have been used throughout human history for various purposes. Having co-evolved with animal life, many of the plants from which these natural products are derived are billions of years old. Tens of thousands of these products are produced as secondary metabolites by higher plants as a natural defense mechanism against disease and infection.

Many of these natural products have pharmacological or biological activity that can be exploited in pharmaceutical drug discovery and drug design.

Medicinal Uses turmeric

Turmeric is used as an herbal medicine for rheumatoid arthritis, chronic anterior uveitis, conjunctivitis, skin cancer, small pox, chicken pox, wound healing, urinary tract infections, and liver ailments . It is also used for digestive disorders; to reduce flatus, jaundice, menstrual difficulties, and colic; for abdominal pain and distension ; and for dyspeptic conditions including loss of appetite, postprandial feelings of fullness, and liver

and gallbladder complaints. It has anti-inflammatory, choleric, antimicrobial, and carminative actions. The main clinical targets of turmeric are the digestive organs: in the intestine Turmeric (*Curcuma longa*) is a spice used for cooking but has gained immense popularity as one of the most powerful herb for fighting various diseases. Turmeric can be found in India and other Southeast Asian countries. The dried root of the plant is ground to create the distinctive yellow turmeric powder. There are numerous chemical compounds found in turmeric, named curcuminoids, wherein the active ingredient is curcumin. Curcumin is the ingredient that gives turmeric many of its vast health benefits. Turmeric contains more than 100 chemical compounds that contribute to its healing abilities. Curcumin (diferuloylmethane), a polyphenol, has been shown to target many cell pathway signaling molecules. At the same time, it manifests activity at the cellular level. Curcumin has strong anti-inflammatory and antioxidant properties. Other curcuminoids include bisdemethoxycurcumin, and dimethoxycurcumin.

Turmeric Use In cough Syrup

Turmeric gargle: A turmeric gargle also gives good results. To one cup of hot water, add in half a teaspoon of turmeric powder and half a teaspoon table salt. Use this liquid as a throat gargle and you are sure to experience relief from cough.

Turmeric and honey mixture: For a dry cough, turmeric powder mixed with a teaspoon of honey taken three to four times a day is effective. You could also try preparing turmeric tea by adding one tablespoon of turmeric powder into 4 cups of boiling water. Keep for a few minutes, strain and mix in some lemon and honey to the liquid and drink.

Ever since coronavirus took the world by storm a few major changes have taken place in our lifestyles, and perspectives. One of the biggest changes is that people have started to take their immune system seriously and as a result increased consumption of the food items which improve our immunity. The sales of Indian spices like turmeric and ginger also increased a lot due to their immense health benefits including their potency as immune boosters. People across the globe were using honey and turmeric to get rid of cough and cold. So in case you have a cough, you can also opt for a healthy concoction at home. Instead stay at home and try this simple concoction of turmeric and honey for cough.

Cardamom

Cardamom, also spelled cardamon, spice consisting of whole or ground dried fruits, or seeds, of *Elettaria cardamomum*, a herbaceous perennial plant of the ginger family (*Zingiberaceae*). The seeds have a warm, slightly pungent, and highly aromatic flavour somewhat reminiscent of camphor. They are a popular seasoning in South Asian dishes, particularly curries, and in Scandinavian pastries. Introduced to Europe in the mid-16th century, cardamom bears a name that blends the Greek words for "spice" and "cress." The name is sometimes mistakenly applied to similar spices in the ginger family, but it properly describes two related varieties of the spice, black and green, the latter being the more common. Black cardamom is aromatic and smoky, whereas green cardamom has a milder flavour.

Cardamom is used for digestion problems including heartburn, intestinal spasms, irritable bowel syndrome (IBS), intestinal gas, constipation, liver and gallbladder complaints, and loss of appetite. It is also used for common cold, cough, bronchitis, sore mouth and throat, and tendency toward infection. Some people use cardamom as a stimulant and for urinary problems. Elaichi For

Colds & Cough: How Does It Help? According to Macrobiotic Nutritionist and Health Coach Shilpa Arora, "Oil from elaichi is a useful stimulant; it is an antiseptic that helps calm the digestive system that further heals the throat, colds and cough

Black pepper

Prevents Any Sort of Cancer: Black pepper is said to prevent cancer when it is mixed with turmeric.

Good for Digestion: ...

Prevents Constipation: ...

Treats Skin Problems: ...

Good for Your Hair: ...

Aids in Weight Loss: ...

Treats Depression: ...

Helps in Treating Respiratory Diseases:

It is best to crush the peppercorns for maximum benefits. Black pepper is also known to alleviate chest congestion and declog nose. Black pepper mixed with honey is a trusted tonic across Indian households as honey serves as a natural cough suppressant.

Black peppercorns are mentioned in Ayurveda, Siddha and Unani medicine in India. The 5th century Syriac Book of Medicines prescribes pepper (or perhaps long pepper) for illnesses such as constipation, diarrhea, earache, gangrene, heart disease, hernia, hoarseness, indigestion, insect bites, insomnia, joint pain, liver problems, lung disease, oral abscesses, sunburn, tooth decay, and toothaches.^[3] Various sources from the 5th century onward also say pepper is good to treat eye problems. Often special ointments made with pepper have to be applied directly to the eye. There is no current medical evidence that any of these treatments has any benefit; pepper applied directly to the eye would be quite uncomfortable and possibly damaging.^[4]

Peppermint



Peppermint (*Mentha × piperita*) is a hybrid species of mint, a cross between watermint and spearmint.^[1] Indigenous to Europe and the Middle East,^[2] the plant is now widely spread and cultivated in many regions of the world.^[3] It is occasionally found in the wild with its parent species.^{[3][4]} Although the genus *Mentha* comprises more than 25 species, the one in most common use is peppermint.^[5] While Western peppermint is derived from *Mentha × piperita*, Chinese peppermint, or bohe, is derived from the fresh leaves of *M. haplocalyx*.^{[6][7][8]} *M. × piperita* and *M. haplocalyx* are both recognized as plant sources of menthol and menthone, and are among the oldest herbs used for both culinary and medicinal products.^{[5][9]} Peppermint has square stems, stalked, smooth, dark green leaves, and blunt oblong clusters of pinkish lavender flowers. As with other mints, the plant can spread aggressively by means of stolons (underground stems). Natural hybridization among wild species has yielded many varieties of peppermint, but only two, the black and the white, are recognized by growers. Black peppermint, also called English peppermint or mitcham mint, is extensively grown in the United States and has purplish stems. The white variety is less hardy and less productive, but its oil is considered more delicate in odour and obtains a higher price Peppermint Use In Cough Syrup.

Relaxing the colon during medical exams, including barium enemas. Using peppermint oil as an ingredient in enemas seems to relax the colon during barium enema examinations. Also, taking peppermint oil by mouth before the start of a barium enema seems to decrease spasms.

Breastfeeding discomfort. Research suggests that breastfeeding women who apply peppermint oil on their skin have less cracked skin and pain in the nipple area.

Heartburn (dyspepsia). Taking a specific product containing peppermint oil and caraway oil (Enteroplant by Dr Willmar Schwabe Pharmaceuticals) by mouth seems to reduce feelings of fullness and stomach spasms. Another specific combination product containing peppermint (Iberogast by Steigerwald Arzneimittelwerk GmbH) also seems to improve symptoms of heartburn, including severity of acid reflux, stomach pain, cramping, nausea, and vomiting. The combination includes peppermint leaf plus clown's mustard plant, German chamomile, caraway, licorice, milk thistle, angelica, celandine, and lemon balm. Another similar combination

product containing peppermint leaf, clown's mustard, German chamomile, caraway, licorice, and lemon balm (STW 5-II by Steigerwald Arzneimittelwerk GmbH) also seems to help.

Spasms caused by endoscopy. Research shows that peppermint oil can reduce pain and spasms in people undergoing endoscopy, a procedure used to see within the gastrointestinal tract. • Tension headache. Applying peppermint oil to the skin seems to help relieve tension headaches.

Clove



Tropical evergreen tree of the family Myrtaceae and its small reddish brown flower buds used as a spice. Cloves were important in the earliest spice trade and are believed to be indigenous to the Moluccas, or Spice Islands, of Indonesia. Strong of aroma and hot and pungent in taste, cloves are used to flavour many foods, particularly meats and bakery products; in Europe and the United States the spice is a characteristic flavouring in Christmas holiday fare, such as wassail and mincemeat.

As early as 200 BCE, envoys from Java to the Han-dynasty court of China brought cloves that were customarily held in the mouth to perfume the breath during audiences with the emperor. During the late Middle Ages, cloves were used in Europe to preserve, flavour, and garnish food. Clove cultivation was almost entirely confined to Indonesia, and in the early 17th century the Dutch eradicated cloves on all islands except Amboina and Ternate in order to create scarcity and sustain high prices. In the latter half of the 18th century the French smuggled cloves from the East Indies to Indian Ocean islands and the New World, breaking the Dutch monopoly.

Clove In Cough Syrup

Cloves contain phenolic compounds such as eugenol and gallic acid, which are anti-inflammatory and antibacterial in nature. Packed with medicinal properties, cloves not only relieve a sore throat but also alleviate pain caused due to persistent coughing. It also has essential oil, which acts as a natural expectorant, clearing the respiratory passage. Moreover, it also helps you to get rid of itchy feeling in the throat, caused due to a dry cough. The antiviral and antioxidant properties of cloves help in cleansing toxins from the body and boosting the immunity.

Formula:

Sr.no.	Ingredients	Quantity Taken	Uses
1	Honey	20ml	Antiinflammatory An Antibacterial
2	Tulsi	10g	Immunity Booster
3	Ginger	20g	Redusing Inflammation
4	Termerse	5g	Anti oxidant
5	Cardamom	2g	Aromatic
6	Black pepper	3g	Preservative
7	Peppermint	5g	Cooling Agent
8	Clove	1g	Expectorant

Formulation Of Herbal Cough Syrup

Each of herbal was taken.

Herbs are mixed with 100 ml of water.

All ingredients was boiled until total volume become one fourth of previous afterboiling extract was cooled and

filtered.

Filtrate was taken to prepare final syrup.

Evaluation parameters of formulation-

Colour examination:

2ml of prepared syrup was taken and smelled.

Then odour was observed.

Odour examination:

2ml of prepared syrup was taken and smelled.

Then odour was observed

Taste examination:

A pinch of final syrup was taken and examined the taste of syrup

pH examination:

Washed to glass electrode with distilled water and cleaned.

Placed the electrode in PH 7 buffer solution and set the value of 7 on the PH meter turning the calibrate knob on the meter.

Removed the electrode and washed with distilled water and cleaned. 4)placed electrode was in the PH 4 buffer solution.Adjust the value. 5)Then electrode was placed in the final syrup and PH was Observed.

Density examination :

Cleaned the specific gravity bottle.

The bottle was cleaned at least two times with distilled water.

Measured the weight of empty dry bottle syrup with stopper(w1)

The bottle was filled with final syrup and placed the stopper,wipe out excess syrup from outside the tube.

Measure the weight in grams of syrup(w2)

Calculate weight in grams of syrup(w3).

Stability testing:

Stability testing of the prepared herbal syrup was performed on keeping the samples at accelerated temperature condition.

The final syrup was taken in culture tubes.

Then kept at accelerated temperature at 4 degree celcius,Room temperature and 47 degree celcius respectively.

The samples were tested for all the physicochemical parameters (colour,odour,taste) turbidity and at the interval of 24 hr,48 hr and 72 hr to observe any change.

II. RESULT

Sr. No	Test	Percentage
1	Moisture	17,6
2	Water Extractive Value	27.2
3	Ethanollic Extract Value	41.2
4	Total Ash Value	7.5

III. CONCLUSION

By using all the herbal products we successfully prepared the herbal jaggery based immune booster syrup and we have done all the evaluation tests also justify on the basis of evaluation tests , it have been concluded that the prepared herbal jaggery based immune booster syrup could be stable for longer time.The study emphasised that, in contrast to white sugar, which is linked to diseases like diabetes and obesity, sugarcane juice used to make gur and jaggery offers a variety of nutrients and has positive health effects. This is true even though the consumption of products with added sugar is rising sharply. Increased use of jaggery and products related to it

may improve health and immunity.

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