

# Formulation And Evaluation of Pediatric Herbal Chocolate

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**Abstract—The chocolate is most loving food of children where as the medicine is hating substance. So, objective of present study was to formulate the chocolate that contain drug i.e., medicated chocolate to prevent the disease. In children cough, viral infection is most common diseases. Ocimum sanctum, Tulsi is the herbal drug which having several medicinal properties, antitussive activity is one of them. Thus, we have to formulate the chocolate with aqueous extract of tulsi that gives antitussive activity. Further, prepared medicated chocolate is evaluated for general appearance, dimension, hardness, blooming test, drug content determination, physical stability etc.**

## INTRODUCTION

The chocolate is most loving food of children where as the medicine is hating substance. So, objective of present study was to formulate the chocolate that contain drug i.e., medicated chocolate to prevent the disease. In children cough, viral infection is most common diseases. Ocimum sanctum, Tulsi is the herbal drug which having several medicinal properties, antitussive activity is one of them. Thus, we have to formulate the chocolate with aqueous extract of tulsi that gives antitussive activity. Chocolate abundantly contains compounds such as saturated fat, polyphenols, sterols, di and triterpenes, aliphatic alcohols, and methylxanthines. Phenyl ethylamine that naturally occurs in the brain and it is termed as ‘the love drug’ which produces the feeling of well-being and contentment. Phenyl ethylamine also present in chocolate that raises blood pressure, also blood sugar level that gives the feeling of wellness.

### Health Benefits of Tulsi (Holi Basil) for Kids

Tulsi leaves (also known as Holi Basil) can help to cure many health diseases in both adults and kids. Many people are aware that Tulsi leaves or holy basil has remedial power. It is one of the best medicinal basil discovered till now. Tulsi has several medicinal properties and is a very important herb particularly in Ayurveda and Naturopathy. Tulsi has essential oils which effectively act on respiratory system and helps fight pollution to some extent. There are many more benefits and it is advisable to make it a habit of your child

to have few leaves of Tulsi every day. The following are the some of the major health benefits of Tulsi.

### Great for Healing skin problems:

Mixing Tulsi with bathing water or by simply washing your child’s face with it will keep your child away from all kinds of skin infections.

### Boosts the immunity:

Holy basil has powerful healing and medicinal properties. You can boil some basil leaves in water, and let your child drink this every morning. It is a safe way to boost their immune system.

### Good dental health:

Tulsi has the power to fight bacteria that develops in children’s mouth. These bacteria, if not treated on time, leads to dental issues like tartar, plaque, bad breath and cavities.

### Digestive health:

Tulsi leaves help to strengthen digestive system. It works as an appetizer and by secreting digestive enzymes, it promotes digestion.

### Good source of Vitamin K:

Vitamin K is an important element playing big role in bone health and heart health. It helps maintain brain function and healthy metabolism of your child.

### Promotes respiratory health:

Tulsi leaves successfully act on respiratory system. It helps cure almost all kinds of respiratory disorders. It can cure bronchitis, both, chronic and acute.

### Pudina/Mint Leaves: Health Benefits

Mint or Mentha is one of the oldest herbs widely used in global cuisines and it is highly prized for its innumerable therapeutic properties and uses. The divine flavour of pudina leaves renders a distinct taste and aroma to the dishes and it is used to make chutney, raita and refreshing drink. Mint leaves are also valued as a mouth freshener since times

immemorial for its amazing healing properties.

#### Mint leaves

Mint the aromatic herb also known as Mentha, belongs to the plant family Lamiaceae, there are more than 13-24 species of mint exists due to hybridization and overlapping of many species. Spearmint and peppermint are the other two common varieties of mint. Mint species is extensively distributed and grows in wet moist land across India, Europe, Africa, Australia and other Asian countries.

Mint leaves go by the vernacular name Pudina in all Indian languages. In Sanskrit, it is known as pudina, putiha, podinaka, phudino and podina.

#### Pudina/Mint Leaves Uses

Pudina leaves can be used fresh or dried in a spectrum of culinary dishes. The leaves render a warm, fresh, aromatic, sweet flavour and deliver a cool aftertaste which is used in making tea, beverages, jellies, syrups, ice creams and candies. Mint flavored tea is quite popular in India and also widely relished in the Arabian and African countries. Mint julep or mojito is an alcohol flavored cocktail drink.

Menthol is the key element in mint essential oil which is an ingredient in many cosmetics, perfumes and also used as an aromatherapy oil to calm the digestive system.

#### Ayurvedic Uses:

The aromatic ayurvedic herb is a natural coolant, with a sweet and a pungent aftertaste. Mint has the quality to pacify all the three doshas and chiefly manages the Pitta dosha. Pudina leaves owing to its carminative properties helps in digestion and assimilation of food and treats colic pain. The extract of pudina leaves is used to treat intestinal worms.

#### Nutritional Profile:

Mint leaves are low on calorie and contain a minimal amount of protein and fat. It is heaped with Vitamins A, C and B -complex which enhances healthy skin and bolsters the immunity. Pudina leaves are one of the foods rich in iron, potassium, and manganese which promote brain function and improves the haemoglobin profile. The aromatic essential oils are piled with antioxidants which scavenges the cells from free radical damage and support overall health.

Calories 2.24

Protein 0.12 g

Carbohydrates 0.48 g

Fat 0.03 g

Fiber 0.26 g

Aim: To Formulation And Evaluation Of Pediatric Herbal Chocolate.

#### OBJECTIVE OF THE WORK

The main objective of the present invention to provide a novel herbal chocolate and a process for preparation of the product. To use in the viral infection treatment in the children's. The chocolate is most loving food of children where as the medicine is hating substance. So, objective of present study was to formulate the chocolate that contain drug i.e., medicated chocolate to prevent the disease. In children cough, viral infection is most common diseases. Ocimum sanctum, Tulsi is the herbal drug which having several medicinal properties, antitussive activity is one of them. Thus, we have to formulate the chocolate with aqueous extract of Tulsi that gives antitussive activity.

#### METHOD OF PREPARATION OF MEDICATED

Water bath was set in such a way that water become hot having temperature about 50°C. Then chocolate base was melted in porcelain dish till it become free flowing. On another side, sugar syrup was prepared by taking sugar in appropriate quantity with distilled water in beaker on water bath. Then add prepared sugar syrup in required quantity into melted chocolate base. After above step, appropriate quantity of drug extract.

#### Procedure:

- 1) Collection of fresh leaves of Tulsi from garden.
- 2) Leaves crushed and converted in to the pest
- 3) Paste of Tulsi leaves boiled with distilled water for 30-45 minutes.
- 4) Filtration of extract.
- 5) Preparation of sugar solution
- 6) Chocolate base was melted in porcelain dish till it become free flowing.
- 7) Addition of the Tulsi extract and sugar solution.
- 8) Whole mass of chocolate base was poured in a chocolate mould.
- 9) Refrigerated till it become solid form approximate 3-6Hrs.
- 10) The Solidified Chocolate Kept Out At Room Temperature i.e. 28°C

#### Evaluation Parameters Evaluation

##### 1. Phytochemical analysis

To 2-3 ml of aqueous extract, add a few drops of following reagents.

##### 2 General appearance

Colour - Dark Brown  
 Odour - Chocolate with no brunt, no smoky  
 Taste - Slight sweet  
 Texture - Smooth and even

##### 3. Physical stability

To check the physical stability, sample of chocolate was kept in closed container for 1 month at 28°C After one month interval, Test sample of chocolate was observed for physical appearance and drug degradation.

##### 4. Drug content determination

Drug content of medicated chocolate was determined by Thin Layer Chromatography. Here, control was taken as aqueous Tulsi extract and test as melted chocolate sample. TLC plates were prepared by using silica G and plates were activated for ½ Hr. Spotting was carried out on both plates i.e., control and test plate by using capillary. Run both the plates in mobile phase determined

#### RESULT AND CONCLUSION

In the present study, development of Pediatric Herbal Chocolate having antitussive activity was carried out. Aqueous extract of Tulsi leaves was prepared and phytochemical analysis was carried out to check the presence of desired compounds that shows the acceptable results. By using prepared extract medicated chocolate prepared and evaluated for general appearance, dimension, hardness, blooming test, drug content determination and physical stability. From above study, we concluded that the chocolate provides smooth and creamy texture to the formulation and are good for masking the unpleasant taste associated with some drugs. Also, good oral drug delivery system to gives therapeutic effect.

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