



PREPARATION OF HERBAL MIXTURES OF GINGER & TURMERIC: NATURAL REMEDIES FOR LIVER BOOSTER

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ABSTRACT

Due to the modern way of living there are a variety of unhealthy changes in food habits that have taken place. This new trend of unhealthy food habits among the population is developing risk of obesity, diabetes, heart attack, and many hepatic (liver) disorders. These hepatic disorders may increase multiple problems in the body. The liver is a very important organ with a variety of vital functions. Hence it is necessary to promote our liver health with the help of natural super foods like ginger. In recent years, the use of natural foods as drugs has increased all over the world due to their better therapeutic effect and less toxic effects as compared to other medicines. Ginger shows a variety of actions like antioxidants, anti-inflammatory, antibacterial, and antiemetic. In which antioxidant property of ginger along with Honey and turmeric (*an* herbal mixture) help to boost liver health, which may result in better metabolism of food and also promotes immunity of the body.

Key words: Hepatic disorders, Superfoods, ginger, antioxidants, anti-inflammatory

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INTRODUCTION

1) Ginger

Ginger (*Zingiber officinale* Roscoe) is a very common medicinal plant which is easily available to the human population. It contains gingerols as main active compound, which are identified by their characteristic odour.^[1] The most abundant active component of ginger is 6-gingerol and it shows antioxidant activity.^[2] Various *in vitro* studies of ginger claimed that the phenolic groups present in gingerol shows antioxidant activity.^[3]

Other properties of ginger

Ginger is used as a traditional medicine in China and East Asian countries to treat-

- rheumatic arithritis
- asthma
- constipation
- inflammation
- Diabetes^[4,5,6].

Various studies on ginger are performed on their bioactive components. In several studies, ginger and its active components have been shown to exert strong antioxidant activities *in vitro* and *in vivo*^[7,8,9]. There is a difference in the antioxidant potencies of ginger in fresh and dried forms of ginger^[10].

2) Honey

Honey is well known as a sweetener, flavoring agent and natural dietary antioxidant. The components responsible for the antioxidant properties of honey are -

- phenolic acids
- flavonoids
- vitamins
- enzymes^[11,12]

However, the antioxidant activity is mainly due to the presence of phenolic groups but all these components combinedly shows better antioxidant properties. It may shows some synergistic effects^[13,14]

3) Turmeric

Turmeric is rhizome of the *Curcuma longa* plant, which belongs to the Zingiberaceae family^[15]. Turmeric has been widely used as the main part of dishes in Asian countries for its color, flavor, and taste. It is also used in Ayurvedic medicines in various ailments which includes-

- Gastric
- Hepatic
- Gynecological
- Infectious diseases^[16,17].

Compositions of turmeric-

Table 1: contents in turmeric [18]

CONTENTS	PERCENTAGE
Carbohydrates	69.43%
Proteins	6.3%
Oils	5.1%
Minerals	3.5%
Other elements	15.6%

The main goal of this project work was to prepare a simple mixture with some herbal ingredients like ginger and turmeric which may be fruitful for the liver problem and inflammations.

METHODS AND MATERIALS

MATERIALS REQUIRED:

All the materials are enlisted in table 2, were collected from local vendors of Bareilly and Ginger and turmeric was cleaned with the help of water and dried at sunlight.

Table 2: contents in herbal mixture

Ingredients	Quantity taken
Ginger extract	2ml
Honey	7ml
Turmeric powder	2g
Water	Qs

METHODOLOGY:

The procedure for the formation of herbal mixture involves two steps -

1. Extraction of constituents of ginger
2. Preparation of herbal mixture

➤ **Extraction of essential oil from ginger**

First of all fresh and pure ginger was collected then after cleaning and drying, the extraction process was carried out after grinding it with the help of hydro distillation method. The extraction was done in a distillation apparatus. The fresh ginger sample was grinded into mash using a manual blender. The 500ml round bottom flask of the distillation apparatus was filled with about 250ml water, then 35 grams of the grinded fresh ginger was added into the flask. The quick fit distillation apparatus was set on a heating mantle. The temperature was set to 90°C. Heat the mixture for about 30 minutes to get the extract materials.



Figure 1: Soaked ginger



Figure 2: Crushed ginger

➤ **Preparation of herbal mixture**

100 ml of water was taken in a beaker and about 2g of turmeric powder was added in it. The mixture was heated till half the water evaporated. After this 2 ml of extracted constituents of ginger was added and mixed into initial solution. It was kept for cooling at room temperature for 30 minutes and then 7ml of honey was added in it. The volume of herbal mixture was finally made up to 50 ml with help of water.



Figure 3: Prepared herbal mixture

The herbal mixture contains all the ingredients with antioxidant property so it may act as a powerful liver booster that improves liver health and also improves liver functions.

CONCLUSION

The prepared herbal mixture contains the three major ingredients IE: Honey, ginger and turmeric and there were variety of scientific evidences available which proved that the antioxidant property, promotes liver health, so The above article concluded that, these three super foods contain a variety of properties which may help in boosting the immunity as well as promotes the liver health. Ginger also provides relief from arthritis. All the three ingredients are easily available, beneficial against bad food habits and the mixture is a better alternative to tea.

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