INFORMATION

VALUE ADDITION OF *OCIMUM BASILICUM* L. FOR THE PREPARATION OF TRADITIONAL CRUDE SALT AND ITS MEDICINAL USES

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Abstract: The crude salt (Hara namak) is prepared by local inhabitants of district Solan in Himachal Pradesh using *O. basilicum* L. along with several other ingredients, and uses it to add flavour to their food as well as to cure several stomach ailments. The paper describes the indigenous method of preparation of this salt and its uses in different parts of Himachal Pradesh.

Keywords: *Ocimum basilicum*, Crude salt, Traditional medicine, Traditional knowledge, Value addition

INTRODUCTION

The Himachal Pradesh encompasses rich diversity of plants. About 643 medicinal plants have been explored till now (Samant *et al.*, 2007). Several studies have been conducted in different parts of Himachal to document the traditional uses of plants by local people (Kumar and Paul, 2009). The local inhabitants residing in the close vicinity of the plants have substantial knowledge regarding the properties of plants, functioning of bionetworks and traditional methods of using and managing them sustainably. From the time immemorial local inhabitants have been using these plants to treat several primary health related problems and have also been engaged in bringing innovative uses to boost their health (Nehal *et al.*, 2013).

The local inhabitants of Solan districts traditionally prepare crude salt (Hara namak) from *O. basilicum* L. (Bhabri) along with *Mentha spicata* L. (Pudina), *Cuminum cyminum* L. (Jeera), *Coriander sativum* L. (Dhaniya), *Piper nigrum* L. (Kali mirch) and *Ferula assafoetida* L. (Hing) and use it to add flavour to their food as well as curing several stomach ailments.

The genus *Ocimum* has a number of species that are used to treat different types of ailments from ancient time, especially the species *O. basilicum* L. (Siddiqui *et al.*, 2012). It is also known as sweet basil. It is cultivated universally as herbaceous perennial plant (Bantis *et al.*, 2016). It is commonly used in traditional medicine (Loughrin and Kasperbauer, 2001; Gulcin *et al.*, 2007; Bora *et al.*, 2011). It is also used as a culinary and ornamental herb (Gulcin *et al.*, 2007). It has also been used as commercial fragrances, flavours and to improve the food products shelf life (Makinen *et al.*, 1999; Suppakul *et al.*, 2003; Nguyen and Niemeyer, 2008).

In Indian Siddha medicine, it is used for treating pimples (Tsai *et al.*, 2011). The leaves and flowers of sweet basil are used in folk medicine as a tonic and vermifuge. Tea prepared from sweet basil is used for treating dysentery, nausea and flatulence. The oil of the plant is beneficial for the alleviation of spasm, mental fatigue, cold, and as a first aid treatment for wasp stings and snakebites (Baytop, 1984).

Mentha spicata L. (Pudina) popularly known as mint is also traditionally used to treat cold, flu, respiratory problems and stomach ache. It is also used to impart flavour and fragrances to several food items (Kee *et al.*, 2017). *Cuminum cyminum* L. are widely used as the spice for its characteristic aroma, but traditionally local people use it to treat a variety of diseases, including chronic diarrhoea and stomach related problems (Srinivasan, 2018).

Coriander sativum L. (Dhaniya) leaves are used to impart fresh fragrance in several food items. It is considered as rich source of vitamin A, B2 (Riboflavin), C and dietary fibre (Nadeem *et al.*, 2013). *Piper nigrum* L. (Kali mirch) popularly known as king of spices contains a pungent alkaloid i.e. "piperine" a digestive stimulant which helps in digestion of food (Damanhouri and Ahmad, 2014). *Ferula asafoetida* L. (Hing) is an oleo-gum resin obtained from its rhizome and root. It is highly consumed as a spice and used as a folk medicine for digestion related problems (Amalraj and Gopi, 2017).

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Traditional method of preparation

For the preparation of crude salt commonly known as *Hara namak* in Himachal Pradesh, fresh leaves of *O. basilicum* L., locally known as Bhabhri are collected from the mature plants (Figure-a). The collected leaves, which are free from disease and insect are cleaned and washed to remove soil and dust particles. The leaves are then dried under shade to maintain its flavour (Figure-c). In Himachal Pradesh, local people use herbage part as an ingredient for the preparation of this salt. After drying, it is grinded and then sieved to get fine material (Figure-e). Simultaneously, the fresh diseased and insect free leaves of *Mentha spicata* L. (Pudina) are collected (Figure-b) and washed to remove soil or dust particles. The herbage of Pudina is dried (Figure-d) then it is grinded (Figure-e) and sieved. Take *Cuminum cyminum* L. (Jeera) and *Ferula asafoetida* L. (Hing) in the required ratio shown in Table 1 and roast it under mild heat and then grind it into fine particle. Then add *Coriander sativum* L. (Dhaniya) and *Piper nigrum* L. (Kali mirch) as per required ratio (Table 1), grind it well and mix with the other ingredients. After that take black and common salt in a given ratio (Table 1) and mix it. While mixing, care should be taken that the entire ingredients are mixed properly one by one to avoid the diverse taste (Figure-f). The mixed powder of all ingredients should be kept under air tight and moisture free sealed container to increase its shelf life (Figure-g & h).

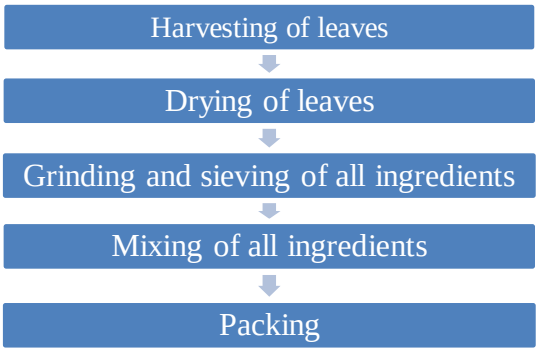
Table 1. Showing the ratio of ingredient in the crude salt.

S. No.	Ingredients (in powdered form)	Ratio
1	*Ocimum basilicum* L.(Bhabri)	10 Part
2	*Mentha spicata* L. (Pudina)	3 Part
3	*Cuminum cyminum* L. (Jeera)	3 Part
4	*Coriander sativum* L. (Dhaniya)	1 Part
5	*Piper nigrum* L. (Kali mirch)	2 Part
6	*Ferula assafoetida* L. (Hing)	1 Part
7	Black salt	10 Part
8	Common salt	21 Part

Traditional uses

Crude salt is traditionally used for stomach spasms, loss of appetite, intestinal gas, fluid retention, cough & cold and worm infections. It is mostly used to add flavour to the food and salad. It also helps in enhancing the memory of old age people. People also use crude salt for conditions such as flatulence, nausea, vomiting, and other conditions. It is a good source of phenolic and flavonoid content which have excellent antioxidant property.

Stages in the preparation



(a) Harvesting bhabhri leaves

(b) Harvesting pudina leaves

(c) Drying of bhabhri leaves

(d) Drying of pudina leaves **(e) Grinding and sieving** **(f) Mixing of all ingredients**

(g) Packaging **(h) Crude salt product**

Figure 1. Showing different stage of preparation of crude salt

CONCLUSION

The traditional crude salt has been prepared and consumed for thousands of years, reveal the intellectual richness of traditional knowledge passed on from one generation to another by the local inhabitants. But this valuable traditional knowledge is getting depleted among the younger generation due to urbanization and modernization. Therefore, there is an urgent need to document these traditional recipes and develop strategies for the value addition of these precious plant resources to save our traditional products for future generation.

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