

# BEETROOT :A BUCKET OF THE COOKIE BITES FOR CURING BLOOD RELATED PROBLEMS.

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## ABSTRACT

*The Beetroot is the taproot piece of the plant. It is a brilliant food which is significant for improvement and development of human body. It is a rich source of cell reinforcement and minerals. It contains betalain which is fundamental for cardiovascular wellbeing. It assumes one more part as a characteristic variety in the material businesses and as a restorative plant to fix the different diseases. Beetroot Cookies made with Jaggery also helps in preventing Diabetes. These cookies help in conquering the heart diseases, Improves the Immunity, detoxify the human body, enhance the wound healing property and many more. Other than the cookies, beetroot can be consumed in the form of Soup, Candy etc. These cookies are a very rich source of Iron and thus is an asset for everyone especially Women going through Menstrual cycle, Pregnancy, Anaemia etc. All in all, these beetroot cookies help in the overall wellbeing of the person.*

## INTRODUCTION:

Beetroot (*Beta vulgaris* L.) belongs to the Chenopodiaceae family. It has a dazzling dark red variety. Beetroot is normally known as beet, chard, spinach beet, ocean beet, garden beet, white beet and Chukander (in Hindi). It has extremely restorative properties which give some sure impact on the human body. Beetroot can be eaten crude, bubbled, steamed and simmered. The significance of vegetables in the human eating routine is all around perceived. Vegetables are not just readymade delightful food be that as it may, they are likewise esteemed for their nutrients and mineral substance.

Without this human body can't keep on being healthy or protected from sickness. Different kinds of cookies contain large amounts of Sugar content within them. Due to exorbitant sugar and manufactured added substances, they are more prone to diseases. Red beetroot is a rich source of minerals (magnesium, manganese, sodium, potassium, iron, copper) (Mathangi, 2019) <sup>[1]</sup>



## HISTORICAL BACKGROUND:

Zohary and Hopf likewise proposed that beetroot cultivars were likewise developed at that point, and a few Roman recipes support this.

Beets are local to the Mediterranean. Albeit the leaves have been eaten since before recorded history, the beetroot was by and large utilized therapeutically and didn't turn into a famous food until French perceived their true capacity in the 1800's. Beet powder is utilized as a shading specialist for some food sources. Some

frozen pizzas use beet powder for shading in pureed tomatoes.

The most widely recognized garden beet is dark red ruby in variety, however yellow, white, and light bolts are accessible in strength markets. Outside the United States, beets are generally referred to as beetroot. It is assessed that around 66% of business beet crops end up canned.

They state the earliest written mention of the beet comes from 8th century Mesopotamia (Hopf et al., 2000) <sup>[2]</sup>.

The Greek Peripatetic Theophrastus later describes the beet as similar to the radish, while Aristotle also mentions the plant (Hill and Langer, 1991) <sup>[3]</sup>. Later English and German sources show that beetroots were commonly cultivated in Medieval Europe

(Hopf et al., 2000; Hill and Langer, 1991) <sup>[4,5]</sup>

#### *Nutritional benefits of butterfly pea extract:*

- Pregnancy Food
- Conquers heart diseases
- Beneficial for bones and in Osteoporosis
- Improves Immunity
- Detoxify the body
- Enhance wound healing property

#### **METHOD AND METHODOLOGY:**

##### (For around 8-10 Cookies):

Wash the beetroot properly and blanch it, grind it in the food processor and then strain it. After that, make the dough out of  $\frac{3}{4}$  cup of flour and beetroot pulp (2 tablespoon) extracted from the food processor.

Now add  $\frac{3}{4}$  tablespoon of Baking Powder and  $\frac{1}{4}$  tablespoon of Baking soda.

Now,  $\frac{1}{4}$  Cup butter, 4 tablespoons of crushed jaggery were also added. After this, sprinkle the pinch of salt along with the  $\frac{1}{2}$  tablespoon Vanilla essence to give it a sweet and drooling flavour.

Finally add 1-2 drops of red gel Colour in the above preparation.

Now the whole preparation is kept for baking at 160-170°C for around 20-25 minutes.

The prepared Cookies are cooled at room temperature and finally they were packed.

#### **PROCESS :**

Wash,blanch and stain the beetroot



Make the dough with flour and beetroot pulp



Add baking soda , baking powder, vanilla essence and jaggery



Keep the preparation for baking



Cool and pack the finally prepared cookies



**Fig.1: Raw materials used in making Beetroot Cookies**



**Fig.2: Beetroot Cookies**

**NUTRITIONAL AND HEALTH BENEFITS OF BEETROOT:**

The utilization of prepared cures severally or along with standard drugs has been used in fluctuated clinical compositions for the cure of different illness, sickness or infection.

Beetroot is one among the notable eatable plants and has significant restorative properties due to the presence of unmistakable normal consumable substances. It contains cancer prevention agent, nutrients and minerals differed fundamental energizer, antimicrobial and anti-carcinogenic.

Beetroot juice is very potent, a beautiful rich ruby red colour it is known to help purify the blood (Kumar et al., 2015) <sup>[6]</sup>. In some rural parts of Africa, the whole leaf blades are usually prepared with the major as one dish (Grubben et al., 2004) <sup>[7]</sup>. Beetroot has significant anti-cancer properties, and also normalize blood pressure. Beetroot juice (Kumar et al., 2015) <sup>[8]</sup>. The effects of beetroot juice on inflammation play a strong role in the development and progression of several clinical conditions including heart disease and cancer, a beneficial effect of beetroot release may be related to this anti-inflammatory capacity (Winkler et al., 1990) <sup>[9]</sup>. Beetroot can be eaten raw, boiled, steamed and roasted. Red beetroot is a rich source of minerals (magnesium, manganese, sodium, potassium, iron, copper) (Mathangi, 2019) <sup>[10]</sup>.

### **BEETROOT PRODUCT:**

The generally dark red foundations of beetroot are eaten bubbled as a cooked vegetable, or cold as a serving of mixed greens in the wake of cooking or potentially crude and shredded, destroyed, either alone or joined with any plate of mixed greens vegetable. A huge extent of the business creation is handled into bubbled and disinfected beets utilized as a pickles.

Eastern Europe soup, similar to cold borscht, is a famous dish. Yellow-colour beetroots are grown on a very small scale for home consumption (Grubben et. al., 2004) <sup>[11]</sup>. The leafy peaks can also be used as a sweet spot for spinach (Kumar et al., 2015) <sup>[12]</sup>. Betanin is widely used as a natural colorant in many dairy product (e.g. milk, ice cream, and yogurt), beverages (juices and burakoviykvas) and Candie (e.g. cookies and desserts) (Azeredo et al., 2008) <sup>[13]</sup>. Dr Manto Tshabalala-Msimang, health minister under Thabo Mbeki, was named "Dr.Beetroot" to supplement beets and other vegetables with antiretroviral medicines, which she considered harmful (Blandy, 2006) <sup>[14]</sup>.

### **ADVANTAGES OF BEETROOT COOKIES:**

#### a) Lactating Mothers:

Utilization of beetroot cookies is very helpful for lactating mothers because the iron content gets directly transferred to the neonates through mother's milk. So this helps in providing the proper iron content to the mother as well the infant without any risk.

#### b) Pregnant Women:

It is beneficial for pregnant women because of the very high Iron content which is present in the Cookies. This iron content helps in overcoming the risk of Anaemic Conditions in the pregnant women and thus lead to Successful pregnancies.

#### c) Anaemia:

It is beneficial for Anaemic patients because it helps in retaining the decreased level of blood in the body.

#### d) Menstruation Cycle:

It is also beneficial for girls and ladies who are on their menstruation period because these cookies help in overcoming the decreased levels of blood which is lost during bleeding and this helps in maintaining the proper level of blood within the body. These cookies have a time span of usability for around 3 weeks.

### **CONCLUSION:**

This cookie was made of wellbeing valuable ingredients, for example, beetroot, Baking Soda, baking Powder, crushed jaggery, vanilla essence, butter. The blend of these Ingredients makes it more solid, delectable and, surprisingly, tempting. This is similarly beneficial for individuals of all age gatherings.

These cookies are rich source of Iron and thus helps in preventing various ailments such as Anaemia and also useful for Pregnant Women, Lactating Mothers as well as for the girls/ women going through Menstruation.

### **REFERENCES:**

- 1) Kumar Y. Beetroot: A Super Food. International journal of Engineering Studies and Technical Approach, 2015,1(3).
- 2) Hill G, Langer RHM. Agricultural plants. Cambridge, UK: Cambridge University Press, 1991, 197-199. ISBN 0-521-40563-7.
- 3) Grubben GJH, Denton OA. Plant Resources of Tropical Africa 2. Vegetables. PROTA Foundation, Wageningen; Backhuys, Leiden; CTA, Wageningen, 2004.

- 4) Hill G, Langer RHM. Agricultural plants. Cambridge, UK: Cambridge University Press, 1991, 197-199. ISBN 0-521-40563-7.
- 5) Grubben GJH, Denton OA. Plant Resources of Tropical Africa 2. Vegetables. PROTA Foundation, Wageningen; Backhuys, Leiden; CTA, Wageningen, 2004.
- 6) Kayalcova P, Bystricka J, Tomas J, Karovicova J, Kovarovic J, Lenkova M. The content of total polyphenols and antioxidant activity in red beetroot. *Potravinarstvo*. 2015; 9(1):77-83.
- 7) Dias MG, Camoes MFGFC and Oliveira L. Carotenoids in traditional Portuguese fruits and vegetables. *Food Chemistry*. 2009; 113:808-815.
- 8) Kayalcova P, Bystricka J, Tomas J, Karovicova J, Kovarovic J, Lenkova M. The content of total polyphenols and antioxidant activity in red beetroot. *Potravinarstvo*. 2015; 9(1):77-83.
- 9) Vali L, Stefanovits-BE, Szentmihalyi K, Febel H, Sardi E, Lugasi A. Liver-protecting effects of table beet (*Beta vulgaris* var. *Rubra*) during ischemia-reperfusion. *Nutrition*. 2007; 23:172-178.
- 10) Kumar Y. Beetroot: A Super Food. *International journal of Engineering Studies and Technical Approach*, 2015,1(3).
- 11) Dias MG, Camoes MFGFC and Oliveira L. Carotenoids in traditional Portuguese fruits and vegetables. *Food Chemistry*. 2009; 113:808-815.
- 12) Kayalcova P, Bystricka J, Tomas J, Karovicova J, Kovarovic J, Lenkova M. The content of total polyphenols and antioxidant activity in red beetroot. *Potravinarstvo*. 2015; 9(1):77-83.
- 13) Atamanova A, Brezhneva TA, Slivkin AI, Nikolaevskii VA, Selemenev VF, Mironenko NV. Isolation of saponins from table beetroot and primary evaluation of their pharmacological activity. *Pharma. Chem. J*. 2005;39(12):650-652.
- 14) Beetroot. Booklet 2444 prepared by the Ministry of Agriculture. Fisheries and Food. Alnwick, U.K. 1983, 40.

