

## A Novel Designed Innovative VIT Chocolate Paan and it's Health Benefits

Nikhil Singh<sup>1</sup>, Shreya Maheshwari<sup>2</sup> and Suneetha V<sup>3\*</sup><sup>1</sup>School of Information Technology, Vellore Institute of Technology, Vellore, Tamil Nadu, India<sup>2</sup>School of Computer Science Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu, India<sup>3</sup>School of Bio Sciences and Technology, Vellore Institute of Technology, Vellore, Tamil Nadu, India**\*Corresponding Author:** Suneetha V, School of Bio Sciences and Technology, Vellore Institute of Technology, Vellore, Tamil Nadu, India.**Received:** March 23, 2021**Published:** April 06, 2021© All rights are reserved by **Manoj Kumar Ghosal, et al.****Abstract**

An innovative food item that cherishes the hearts of all people especially in India with varied culture and diversity which has flavoured ingredients, all making the tongue ask for more! In this study we had revisited traditional benefits of paan and The ingredients are chosen very wisely, based upon its nutritional values, which adds up to fulfil the taste buds which is also very healthy to consume. While we get all the delicate flavours of paan right on point, there is also a dash of chocolate that gives your mouth a delightful and sweet taste. Chocolate paan makes a perfect after-dinner mouth-freshener or it can also be served as a dessert which would make you drown into its refreshing and mesmerizing taste. We searched for the best ingredients to make the paan worth consuming to satisfy the taste buds. Our innovative food item is made suitable to eat for every age group, not just only for children, except the one those who have any kind of allergy with the ingredients of the chocolate paan. The content of this innovative cuisine is a perfect blend of flavours with rightly-mixed ingredients, which makes it tastes, even more, better than the usual ones! Our research was based on searching for the right ingredients which fulfil two conditions: one, it is healthy to consume and second, it has an enthralling taste.

**Keywords:** Innovative Food; Flavours; Ingredients; Chocolate Paan; Refreshing; Healthy; Taste**Introduction**

We have selected a very special pool of eatables for the making of the Chocolate Paan. It not only promotes good health but also helps fight against deadly diseases.

- **Betel Leaf:** Betel leaf, also called paan, is known to have a lot of scientific health benefits. Chewing betel leaf helps to remove oral cancer as it maintains levels of ascorbic acid in the saliva. It is used widely in Ayurveda and also helps in treating diabetes.
- **Walnut:** Walnut is widely available and very easy to add to your diet. It supports healthy ageing and good brain func-

tion. It also reduces the blood pressure, helps in weight control and reduces the risk of some cancers.

- **Chocolate:** Chocolate, especially dark ones, is very nutritious and a powerful source of antioxidants. Quality chocolate is rich in fibre, iron, magnesium and various other minerals. It helps to reduce the risk of heart diseases.
- **Coconut Powder:** Coconut Powder is a great alternative for people with celiac disease as it is gluten-free. It keeps the blood sugar level stable and promotes healthy digestion. It also improves heart health and helps you reduce weight.

- **Clove:** Clove has antimicrobial properties that promote oral health. Clove oil increases the production of gastric mucus which helps protect against stomach ulcers. It also promotes cancer cell death. It helps in lowering blood pressure and promotes insulin production.
- **Tutti frutti:** It is a colourful confectionery which simulates the combined flavour of different fruits. It used to bring sweetness and flavour to the chocolate paan.
- **Sugar coated fennel:** It is widely used as a mouth freshener and is sweet in flavour and highly aromatic due to added sugar and various essential oils.

## Materials and Methods

Our wisely chosen ingredients have a lot to tell! So let's get to the food items that make it worth remembering.

### Collection of ingredients

- **Betel LEAF:** We bought around 60 units of betel leaf from a nearby shop. It is recommended to buy the paans on the same day when you are going to serve the finished product.
- **Walnut:** We bought it from a general store outside VIT campus. To make approximately 60 pans, it is recommended to buy a 0.100 kg (100 gm) packet of walnuts. Crush the walnut into an adequate amount of pieces to be added in the paan.
- **Chocolate:** We bought 10 Cadbury dairy milk, of 160 gm each, from the general store All Maart. The total weight is about 1.6 kg (1600 gm). It is recommended to use fine quality Cadbury chocolates for better results. Crush the chocolate into pieces to add it more easily and effectively in the paan.
- **Coconut powder:** We bought 0.150 kg (150 gm) coconut powder. It is recommended to buy a little more so that it could be used while serving.
- **Clove:** We bought around 60 units of clove which weighs approximately 0.0105 kg (10.5 gm), to be used with each of the chocolate paan.
- **Hershey's chocolate syrup:** We bought 10 sachets of 30 gm each of the Hershey's chocolate syrup, making a total of approximately, 0.300 kg (300 gm). It is recommended to buy around 2-3 packets, that is, 0.09 kg (90 gm) more because it would be required while serving.
- **Tutti frutti:** We bought two packets of different colours of about 100 gm each, making a total of 0.2 kg (200 gm). It can also be served after consuming the paan hence it is recommended to buy a little more for serving purposes.

- **Sugar coated fennel:** We bought approximately 0.1 kg (100 gm) of fennel. It can be served as a mouth freshener and hence it is recommended to buy a little extra amount.
- **Toothpick:** We bought a packet of toothpicks which helped us to seal the paans tightly.

### Quantification of ingredients

To make a single paan the following quantities are used:

- One betel leaf is equivalent to 1 chocolate paan (final product).
- Breaking walnut into small pieces.
- Crushed solid pieces of dairy milk.
- More than a pinch of coconut powder to be sprinkled.
- One clove is required per paan.
- One-fourth tablespoon Hershey's Chocolate Syrup to be placed.
- A pinch of tutti frutti per paan.
- A pinch of sugar-coated fennel per paan.

### Servable chocolate paan preparation

- A properly washed paan is taken and kept on a clean working surface.
- Polish the surface of the paan with Hershey's chocolate syrup to get the ingredients to stick on it.
- Addition of 2 pieces of chocolate, coconut powder, tutti frutti and sugar-coated fennel enriches the product.
- Fold the bottom half of the paan inwards and second bottom half over the folded bottom half to make a conical shape. Place 1 clove at the bottom so that it does not open.
- Now, trim some of the excess parts of the paan from the top and fold the top half of the leaf to seal the paan tightly.
- A piece of walnut is added on the top with some Hershey's syrup, sugar-coated fennel and tutti frutti.
- Insert the toothpick or a part of it in order to seal the paan properly.

## Results and Discussion

The chocolate paan made has proved to be very nutritious in terms of added healthy ingredients and flavours. We have seen how to make a proper servable paan, now let's move on to knowing it's nutrition content [1-10]. The nutrition facts are as follows.

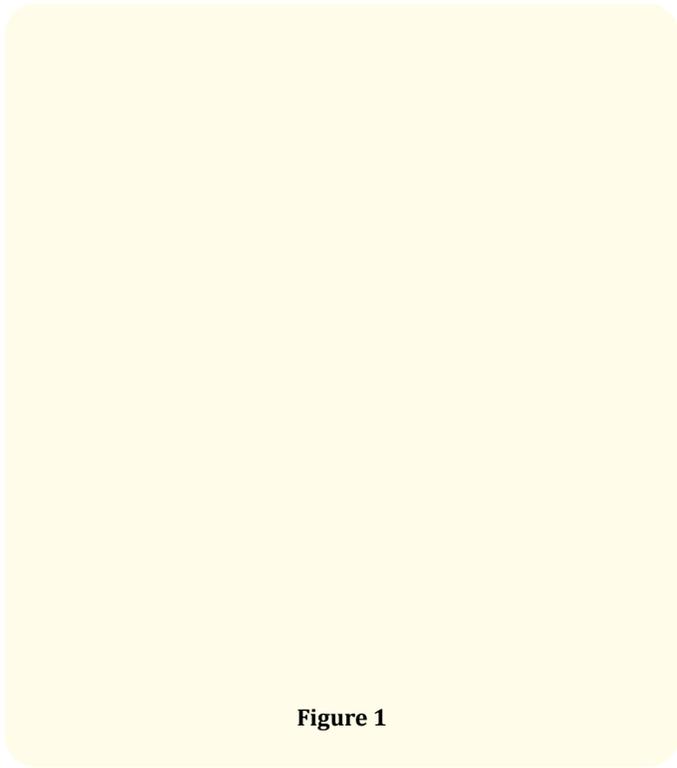


Figure 1

Food Item	Total Weight(in gm)	Quantity
Betel Leaf	-	60 paans
Walnut	100 gm	1 packet
Chocolate	1600 gm	10 chocolates - 10Rs each
Coconut Powder	150 gm	1 packet
Clove	10.5 gm	60 pieces
Hershey's Chocolate Syrup	300 gm - 400 gm	10 sachets - 13 sachets
Tutti Frutti	200 gm	2 packets
Sugar Coated Fennel	200 gm	1 packet
Toothpick	-	1 pack

Table 1: The collected quantity of each food item with its total weight in grams.

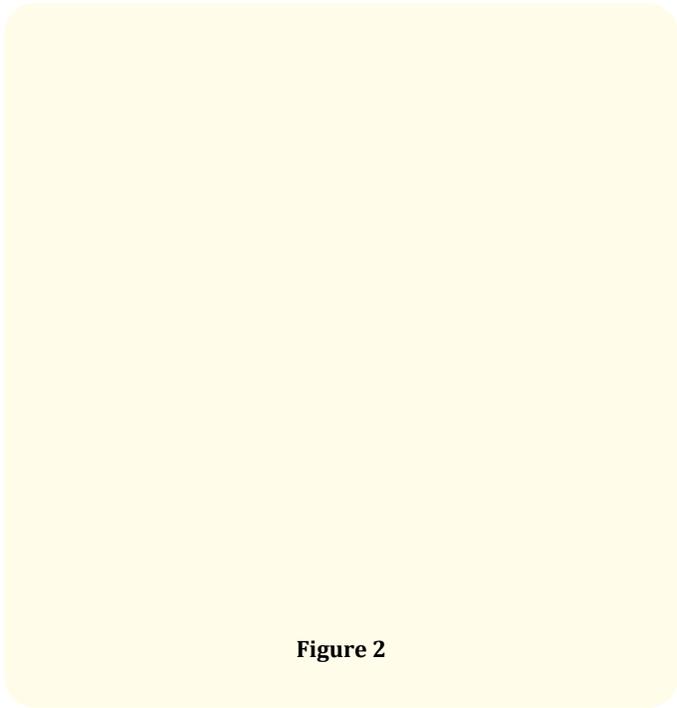
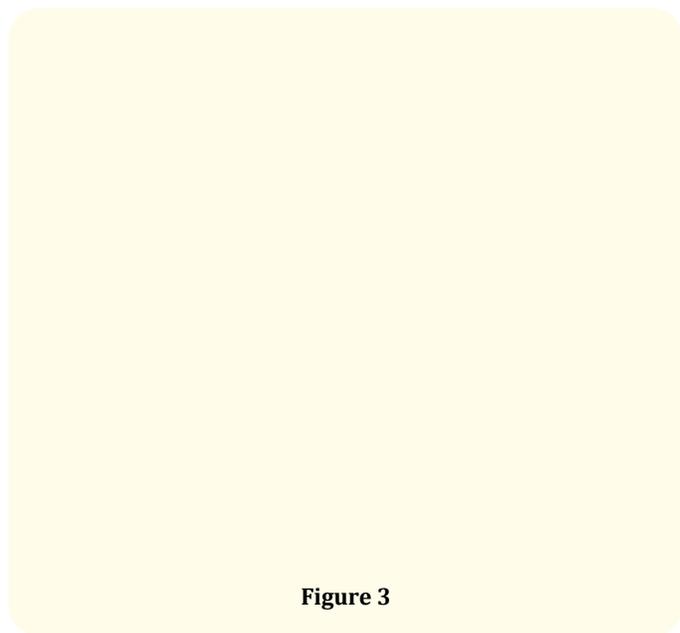


Figure 2

Food Item	Total Carbohy- drates	Fat	Protein	Vitamins	Calories (kcal)
Betel Leaf	6g	1g	3.2g	Vit. A and C	44
Walnut	28g	130g	31g	Vit. A and C	654
Chocolate	42g	21g	5.4g	None	370
Coconut Powder	81g	27g	28.8g	Vit. A	684
Clove	7g	1.4g	0.7g	Vit. A and C	29
Hershey's Chocolate Syrup	192g	0g	0g	None	720
Sugar-coated fennel	66.7g	22.2g	22.2g	Vit. C	555

Table 2: Given according to the number of grams of weight of each food item with its nutritional values of total carbohydrates, fats, protein, vitamins and calories.

**Flowchart of the preparation of paan**



**Figure 3**

**Conclusion**

The content of this innovative cuisine is a perfect blend of flavours with rightly-mixed ingredients, which makes it tastes, even more, better than the usual ones! Our research was based on searching for the right ingredients which fulfil two conditions: one, it is healthy to consume and second, it has an enthralling taste.

**Acknowledgement**

We would like to express our special thanks of gratitude to our professor, Suneetha V. who gave us the golden opportunity to write a complete thesis on A Novel Innovative VIT Chocolate Paan for health benefits and for their able guidance and support in completing the research paper in the given time frame. We would like to extend our sincere and heartfelt obligation towards all the person-ages who have helped us in this endeavour. Without their active guidance, help, cooperation and encouragement, we would not have made headway in the research paper.

We extend our gratitude to the Vellore Institute of technology for giving us the opportunity. We also acknowledge with a deep sense of reverence, our gratitude towards our parents who have always supported us morally as well as economically.

**Bibliography**

1. Dastane NG., *et al.* "This business of bleaching betel leaves". *Indian Farming* 7.10 (1958): 10-12.

2. Garg SC and Jain R. "Chavicol rich essential oil of Piperbetle L., Cutivar Sagar Bangla". *Euro Cosmetics* 5 (1996): 27-28.

3. Gopalan C., *et al.* "Nutritive Value of Indian Foods". pp. 108. National Institute of Nutrition (ICMR), Hyderabad, India. Guha, P.: "Paan Theke Kutir Silpa Sambhabana" (In Bengali)."Exploring Betel Leaves for Cottage Industry (1984): 15-19,

4. In: Krishi, Khadya-O- Gramin Bikash Mela -ABooklet published by the Agricultural and Food Engineering Department, IIT, Kharagpur, India (1997).

5. Kumar N., *et al.* "Piper betle Linn. a maligned Pan-Asiatic plant with an array of pharmacological activities and prospects for drug discovery". *Current Science* 99 (2010): 922-932.

6. Bhide SV., *et al.* "Carcinogenicity of betel quid ingredients: Feeding mice with aqueous extract and the polyphenol fraction of betel nut". *British Journal of Cancer* 40 (1979): 922-926.

7. Shirname LP., *et al.* "Correlation of mutagenicity and tumorigenicity of betel quid and its ingredients". *Nutrition and Cancer* 5 (1983): 87-91.

8. Rao AR. "Modifying influences of betel quid ingredients on B (a)P-induced carcinogenesis in the buccal pouch of hamster". *International Journal of Cancer* 33 (1984): 581-586.

9. Rao AR., *et al.* "Inhibitory action of Piper betle on the initiation of 7.12-dimethylbenz[a] anthracene-induced mammary carcinogenesis in rats". *Cancer Letter* 1985 26 (1985): 207-214.

10. Shetty SR., *et al.* "Salivary ascorbic acid levels in betel quid chewers: A biochemical study". *South Asian Journal of Cancer* 2 (2013): 142-144.

**Assets from publication with us**

- Prompt Acknowledgement after receiving the article
- Thorough Double blinded peer review
- Rapid Publication
- Issue of Publication Certificate
- High visibility of your Published work

**Website:** [www.actascientific.com/](http://www.actascientific.com/)

**Submit Article:** [www.actascientific.com/submission.php](http://www.actascientific.com/submission.php)

**Email us:** [editor@actascientific.com](mailto:editor@actascientific.com)

**Contact us:** +91 9182824667