

Development of Value Added Product and Evaluation of Banana Blossom Incorporated Nut Chocolate

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Banana blossom is a nutritional edible flower present in the tip of the banana plant. Banana blossom is not only a food crop but it is also recognizing for medicinal uses. The flower of banana tree is also a popular vegetable with the people living in countries such as Malaysia, Philippines, Indonesia, and Sri Lanka. E. Elaveniya et al. (2014) it is usually red or purple red in color and attached to the end of the banana fruit bunch. In the red or purple red bracts, lots of small whitish flowers, which would turn into the mature nutritious banana fruit could be found in India. Banana flower is cooked to serve in develop different types of cuisines. Marikkar J.M.N et al. (2016) The flavour is a little starchy and bitter banana flower is generally used for certain illness such as heart pain, diarrhea, asthma and stomach cramps it can be used for the cure of bronchitis, dysentery, weight loss, constipation, heart disease, diabetes ulcers low menstrual bleeding. Sharmila et al. (2013) A number of studies conducted in vivo and in vitro showed the health benefits of

ABSTRACT

Aim of this study work is to develop good nutritional nut chocolate incorporate of Banana Blossom at the level of 10 percent, 20 percent and 30 percent variations, and 20 percent incorporation of Banana Blossom was recorded highest score for overall acceptability (also known as banana heart). Banana Blossom are nutritional value very good with fibre, protein, potassium, iron, magnesium, and vitamin E. Banana flower many or health benefits prevent diabetes, lower menstrual bleeding, increase the milk production for lactating women, good for gastrointestinal health, helpful in weight loss, prevent ulcer, constipation. These pretty flower can be eaten incorporate of different type of food products like- chocolate, cookies because this type food products shelf life long lasting.

KEYWORDS: Banana Blossom, whole milk, cocoa powder

INTRODUCTION

Banana plants are the hug plants on earth without a woody flame. Banana plants can become to heights up to nine (9) meters and look very much like a tree. They are the hug plant on earth without a woody flame. Also, Banana is a fruit of the genus *Musa* of the family Musaceae, one of the most important crops and generally consumed fruit in the world. Bananas are one of the most generally consumed fruits in the world. St. Benedict et al. (2015) Surface from the banana fruit, other parts of the banana tree are recognized to have medicinal properties. Kanchana S. Wickramarachchi et al. (2005) Banana Blossom also know as Banana heart and Banana flower can be eaten raw and cooked.

the consumption of Banana Blossom Bhaskar et al., (2011) For instance, the consumption of cooked Banana flower is believed to be beneficial to diabetic patients. Sulaiman et al. (2011) studied the antioxidant property and mineral contents of banana fruits of several cultivars. Shian et al. (2012). The results indicate that banana flowers are good source of minerals such as magnesium, iron and copper. It contains high level of potassium because potassium is most abundant cation in the intracellular fluid. It influence contractivity of smooth skeletal and cardiac muscles, profoundly affects excitability of nerve tissues and maintains electrolyte and pH balance in the body (Kiguta, 2010). Although the Banana Blossom is highly valuable fiber content. developing a preserved product from the Banana Blossom. This study was therefore, conducted to developed preserved products nut chocolate. The nutritional information of Banana Blossom are as follows (per 100g)- (Sharmila, et al 2013).

Table-1 Banana Blossom Nutritional facts

Calories -51 Kcal	Protein -1.6gm	Fat - 0.27gm	Fiber - 5.7gm
Calcium - 56.0 mg	Iron - 56.17 mg	Potassium- 553.3 mg	Magnesium - 48.7mg

MATERIAL AND METHODS

This study was conducted in the Food Science or Nutrition Laboratory BPS institute of higher learning Khanpur Kalan (Sonipat). *Musa paradisiaca* is the more popular Banana Blossoms were collected in BPSM University. The Banana

Blossom 3-4 outer leaves were removed then will be washed (to remove micro-organism and dirt) and cut into small pieces. Banana Blossom were used for the incorporation of Banana Blossom nut chocolate. For preparation of Banana Blossom incorporated in nut chocolate were as follows;

Ingredients

CONTROL- cocoa powder, whole milk, Butter, Ground sugar, nuts

TYPE -I- cocoa powder, whole milk, Butter, Ground sugar, nuts+ 10% Banana Blossom

TYPE=II- cocoa powder, whole milk, Butter, Ground sugar, nuts+ 20% Banana Blossom

TYPE=III- cocoa powder, whole milk, Butter, Ground sugar, nuts + 30% Banana Blossom

The Banana Blossom incorporated nut chocolate was prepared by mixing the nuts and cocoa powder, Butter, Ground sugar with fixed amount of fresh Banana Blossom as mentioned.

Results and Discussion

Organoleptically evaluation was done using 9-point hedonic scale by semi trained members. BPS university Khanpur Kalan department of the home science was included six trained panel member for the sensory evaluation of nut chocolate. Organoleptic properties are the aspect of incorporated Banana Blossom nut chocolate or other substances as experienced by the senses, including appearance, aroma, texture, texture, taste, flavour, and overall acceptability were fixed by rating scale. The mean scores given by six members were used basics on statistical analysis. The overall acceptability and rating scale score was higher for the 20% level of incorporation of Banana Blossom. Nut Chocolate prepared by addition of Banana Blossom. The panel member evaluated the products for the colour, appearance, flavour, texture, taste and overall acceptability. The result of the sensory analysis is presented in the Table 2 The control nut chocolate received score in the range of 8.00-8.20, for different attributes. Incorporation of 10% level brought down the scores for all sensory attributes and rated as 'desirable' in terms of colour, appearance, texture, taste, and overall acceptability and 'very desirable' in terms of aroma. However, nut chocolate prepared by incorporating 20% of the fresh Banana Blossom was very desirable" in terms of all attributes. Incorporation of with the 20% fresh Banana Blossom, there was increase in all sensory attributes. Nut chocolate prepared by 20% was better accepted as compared with control, or 10% and 30 % incorporated nut chocolate.

Table2. Mean scores of various characteristics of Banana Blossom nut chocolate

Products	Color	Appearance	Aroma	Texture	Taste	Over all acceptability
Nut Chocolate						
Control	8.33±0.21 ^{aaab}	8.33±0.21 ^{ab}	8.33±0.21 ^{ab}	8.00±0.00 ^{ab}	8.00±0.00 ^{ab}	8.20±0.07 ^{ab}
Type I	8.50±0.22 ^{aaab}	8.34±0.21 ^{ab}	8.50±0.22 ^{ab}	8.50±0.22 ^a	8.50±0.22 ^a	8.47±0.13 ^a
Type II	8.83±0.17 ^{aaab}	8.67±0.21 ^a	8.67±0.21 ^a	8.50±0.22 ^a	8.51±0.22 ^a	8.63±0.11 ^a
Type III	7.92±0.21 ^b	7.83±0.17 ^b	8.00±0.00 ^{ab}	7.78±0.21 ^b	7.89±0.17 ^b	7.88±0.09 ^b
CD(P<0.05)	0.60	0.59	0.54	0.56	0.52	0.30
Control=100% Whole Milk I=90% BB+10% WM II=80% BB +20 % WM III=70 % BB +30 %						

Values are mean ± SE of six panelists

The mean is a column bearing different superscript differ significantly.

Conclusion

The Banana Blossom was weighed after that Banana Blossom 3-4 outer leaves were removed. Then will be washed (to remove micro- organism and dirt) and cut into small pieces. Banana Blossom were used for the incorporation of Banana Blossom nut chocolate. At the level of 10%, 20%, 30% add Banana Blossom in nut chocolate. The overall acceptability and rating scale of higher for the 20% level of incorporation of Banana Blossom. Nutritional value of Banana Blossom is found to be high. This is very nutritious and free of cost available so, it can be used different type of food products.

References

- [1] Ajay Anand, Dommati Anand Kumar, Srishti Shukla, Amtul Zehra and Ashok Kumar Tiwari, (2015), Banana flower as potential source of antidiabetic and antioxidant activities, J Biotechnol Biomater 2015, 5:6 <http://dx.doi.org/10.4172/2155-952X.C1.044>.
- [2] Benedict St. Paradise, (2015) An Investigation on the Effectiveness of Banana Heart as Alternative Source of Meat Product, Glendale School St. Benedict St. Paradise Village Project 8, Quezon City.
- [3] Dr Anne Perera, (2011), Cooking Banana Blossom into a delicious vegetable, Food & Nutrition Adviser, SIDO Arusha, Tanzania, Volunteer Service Abroad (New Zealand References).
- [4] E. Elaveniya and J. Jayamuthunagai, (2014) Functional, Physicochemical and Anti-oxidant properties of Dehydrated Banana Blossom Powder and its Incorporation in Biscuits, International Journal of ChemTech Research CODEN (USA): IJCRGG ISSN : 0974-4290 Vol.6, No.9, pp 4446-4454.
- [5] Kigita margaret wahito, (2010). development of sorghum Banana Blossom composite flour for diabetic porridge, College of agriculture and veterinary science.
- [6] Marikkar, J. M. N, Tan, S. J., Salleh, A., Azrina, A. and Shukri, M. A. M, (2016), Evaluation of banana (*Musa* sp.) flowers of selected varieties for their antioxidative and anti-hyperglycemic potentials.
- [7] Other nutritional compounds of banana flower of two cultivars grown in China, Department of Citrus, Citrus Research and Education Center, 700 Experiment Station Road, Lake Alfred, FL 33850, USA.
- [8] Sharmila, Yamuna Devi Puraikalan, (2015) Development and evaluation of Banana Blossom incorporated dark chocolate, Mother Teresa women university, kodaikanal, india
- [9] Zhan-Wu Sheng, Wei-Hong Ma, Zhi-Qiang Jin, Yang Bi, Zhi-Gao Sun, Hua-Ting Dou, Jin-He Gao, Jing-Yang Li and Li-Na Han. (2010), Investigation of dietary fiber, protein, vitamin E