Preparation of Kiwi [Actinidia Deliciosa] Candies to Overcome Thrombocytopenia

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Abstract - Kiwi is the good source of antioxidant and we know taking high antioxidants can breaks the cycle of falling platelets count. Kiwi fruit is rich in potassium and vitamin C which helps increasing platelets count and which can be used in the condition of thrombocytopenia to overcome the reduction in platelets count with their antioxidant property. Fruit candies are becoming consistently more and more famous for their high acceptability in market by the children and adults. Candy is defined as formulation of sugar, any sweetener [honey, sucrose] or any artificial combination with fruits and other ingredients. Candies are formulated in these ingredients are gives energy and that are easy to carry out rather than carrying a fruit. In the further study kiwi is selected to form a candy because it has a number of benefits on our body like it shows antioxidant property which can target the condition of thrombocytopenia, it help in managing blood pressure, reduce blood clotting boosts immune system, helps to treat asthma, as it is a good source of vitamin c it improves skin elasticity along with that kiwi plays and important role to rise the blood platelets count. In present research we had formulated sweet candies using kiwi fruit.

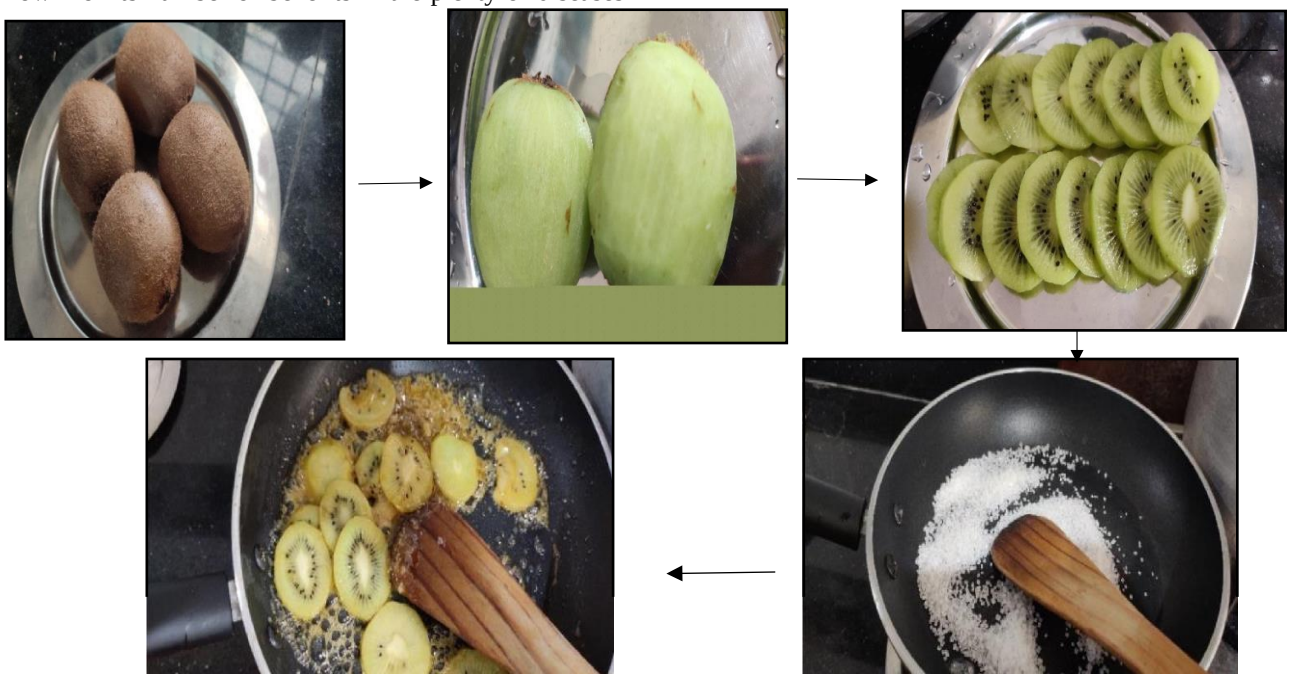
Keywords- Candy, antioxidant, kiwi, storage, stability, thrombocytopenia.

I. INTRODUCTION

Kiwifruit is native to central and eastern China. And the name derives from the kiwi, a native flightless bird, which is a national symbol of New Zealand. Kiwi fruit has been known for its number of benefits in the plenty of diseases like it boosts immune system, helps to prevent sickness, reduce blood clotting protect again vision loss helps to treat asthma, to fighting against thrombocytopenia with is antioxidant activity. The mechanism of kiwi fruit to increase in platelets count as it is having antioxidant property and taking high antioxidants can break the cycle of falling platelets count, along with that kiwi fruit is rich in potassium and vitamin c which helps increasing platelets count.

Indian food industry is a largest manufacturing unit for production of candies and confectionery. children are really love to eat candies and chocolates rather than eating fruits. And in this presented article we are trying to prepare sweet kiwi candies using whole kiwi fruit and sugar. We have been trying to prepare candies using two method and the difference was observed between their storage time. The candies prepared from first method can be stored for 6 to 7 days then there was change in candies taste. And the candies prepared from second method can be stored for 5 to 6 months.

Candies were prepared using kiwi slices which shows potent action on thrombocytopenia, [works on to increase blood platelets count] it is a condition when there were abnormal decreases on platelets count and it can lead to serious consequences.



Consumption of kiwi candies regularly for 8 days helps to increases in platelets count.

II. PROCEDURE

Here we had tries to methods to formulate kiwi candies and the both differ from each other by the shelf life of the product. Candies were prepared from the 1st method do not have long shelf- life, they can be stored for 6 to 7 days only. But candies were prepared from the 2nd method can be stored for 5 to 6 months without any special temperature condition. They are stable at normal room temperature.

Ingredients: 4 kiwis, 1 cup sugar.

1. Peel the kiwis and cut each into thin slices.
2. Put the sugar into pan and heat it till it gets melt.
3. Now, transfer the kiwi slices into the pan and cook it for 10 minutes on medium flame.
4. Switch off the gas and keep it aside for half an hour.
5. Again, heat the pan and cook till sugar starts crystallizes.
6. Transfer the kiwi candies to a plate and keep it in sunlight for 3-4 days. Once candies dry completely sprinkle sugar powder over it.
7. Delicious kiwi candies are ready to relish, it really tastes great. It can be stored for 5-6 months in jar.

III. ADVANTAGES OF KIWI CANDIES OVER KIWI FRUIT

Kiwi candies had number of advantages over kiwi fruit

1. Kiwi is the citrous fruit and not everyone likes citrous fruit and the candies are sweet in taste so people like to eat sweet candies rather than fruit.
2. Kiwi fruit cannot Stored for 5 to 6 months but candies can store at room temperature for 5 to 6 months.
3. Kiwi fruit is not available in all season so candies will be available in every season.
4. As it Consist of sugar also it gives instant energy for various activities.

IV. OBSERVATION

Kiwis include potassium, calories and proteins in greater amount than common fruits as below mentioned in the graph.

Locally available fruits like apple, grapes, orange, watermelon, pineapple are studied. According to it we came to conclusion that, potassium present in apple is 107 mm/100g, in grapes it is 191, for oranges it is 181, for pineapple it is 108 and for kiwi it is 312 mm/100g.

In terms of calories, apple contains 36.9, grapes have 34.5, oranges have 42.3, watermelon have 24.3, watermelon contains 24.3, pineapple have 38 and whereas kiwi have 54 calorie values.

In terms of proteins, apple have 0.1g protein, grapes have 0.6g, oranges have0.8g, watermelon have 0.5g, pineapple have 0.3g and kiwi have 0.9g protein content.

PHYSICAL EVALUATION OF CANDIES

Sr.no	Physical Parameters	Observation
1	Color	Light green
2	Odour	Sweet and fruity
3	Shape	Rounded
4	Taste	Sweet
5	Appearance	Round shape green color
6	Storage	For 5 months

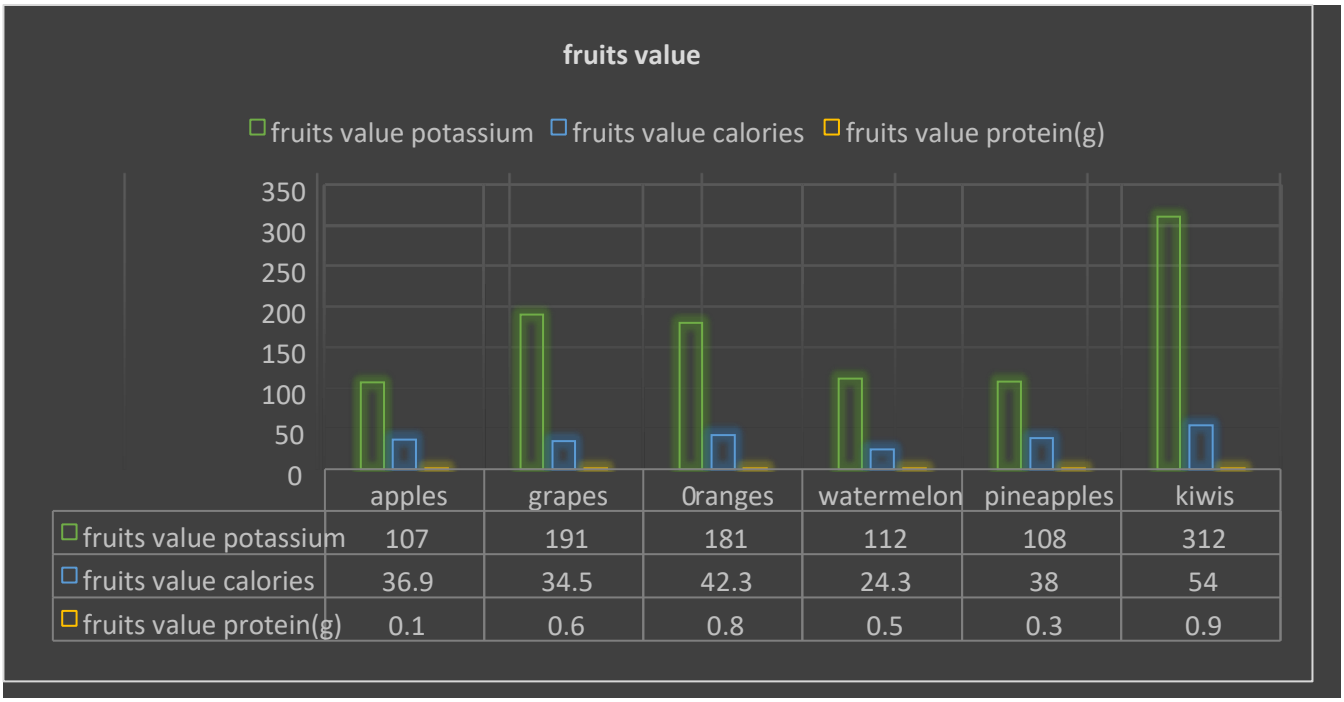
STORAGE STUDY FOR PREPARED CANDIES

The storage study for the candies were performed. Kiwi candies were kept in air tight glass jar for three months and up to three months there is no change is appearance and taste and odour start to change

PHYTOCHEMICAL EVALUATION OF KIWI CANDIES

We are taken an ethanolic extract using ethanol as a solvent. Ethanol: Water [20:80]

Phytochemicals	Developing reagent	Observation	Result
Alkaloids	Dragendroff reagent	Orange spots observed	Presence of alkaloids
Tannins	10% feCl3 in methanol and water	Grey spot	Presence of tannins
Flavonoids	15ml of 3% boric acid and 5ml of 10% of oxalic acid	Fluorescent green spot after observation in UV	Presence of flavonoids
Terpenoids	Anisaldehyde and sulfuric acid	Violet spot	Presence of terpenoids



	apples	grapes	Oranges	watermelon	pineapples	kiwis
fruits value potassium	107	191	181	112	108	312
fruits value calories	36.9	34.5	42.3	24.3	38	54
fruits value protein(g)	0.1	0.6	0.8	0.5	0.3	0.9

V. RESULT ANALYSIS

Formulation and evaluation of kiwi candies was performed successfully. When administration of this candies continued for 3-4 days there is increased in platelets count in the blood hence it can be successfully used in the condition of thrombocytopenia.

As it contains vitamin C helps in normal balance of immune system, reduction of stress, gives energy, proper functioning of nervous system.

Folate helps to blood formation, production of proteins, cell division.

Potassium helps in functioning of nervous system, fluctuating blood pressure.

VI. CONCLUSION

It can be concluded that from the present research article kiwi candies were prepared successfully. And candies can be used in thrombocytopenia to increases in blood platelets count because it contains antioxidants and potassium which helps in increase in platelets count. formulated kiwi candies can be successfully stored for 5 to 6 months at room temperature. After 6 months there will be change in taste and smell of the candies. Among ready to eat food, kiwi candies can become popular because of minimum volume, its numerous benefits, more convenience and relatively longer shelf.

VII. FUTURE SCOPES

- It will be beneficial for increasing platelets and to overcome thrombocytopenia.
- Small children don't take proper diet, they don't like to eat fruits, they don't like to eat sour food items so by these candies they will eat kiwi in the form of candies as it has sweet taste.
- These are rich in vitamins, proteins.

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