

Preparation of nutrient rich jam using Watermelon (Citrullus Lanatus) and Hibiscus extract

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Abstract: - Jam is a sweet food which can be prepared using vegetables and fruits. Jams are the nutritional and beneficial food product to avail seasonable fruit nutrients and to taste all time. Watermelon (Citrullus Lanatus) is nutritional fruit which contains mostly water and vitamins. Hibiscus flower extract have many medical benefits including curing cancer. Chia seeds are used to enhance the texture of jam. Palm sugar is used instead of white sugar because it contains many health benefits compared with white sugar. Lemon juice is used instead of citric acid – around 3grams of citric acid in one juiced lemon.

Key Words: — Watermelon, Hibiscus extract, Pulp, Jam.

I. INTRODUCTION

Jams are nutritional bread spread widely consumed all over the world. Watermelon (Citrullus lanatus) belongs to family cucurbitaceae that have a long warm growing season. It is the best known fresh source of lycopene, a powerful antioxidant responsible for its red color. They are packed with water and nutrient content which is exceptionally refreshing. Hibiscus plants are well known for their large colorful flower, but they also have medical uses. The liquid extracts can help treat a variety of conditions. Chia seeds are the edible seeds of *Salvia hispanica*. As these seeds are hydrophilic absorbs up to 12 times their weight in liquid. Lemon juice is replaced for citric acid. Palm sugar is used as sweetener. It contains less glucose and low glycemic index than table sugar or honey. It also helps to stabilize blood sugar level. Palm sugars have more nutritional benefit than table sugar.



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Fig.1. Nutritional Contents

Table.1. Nutritional content of Watermelon pulp

Nutrients	Content (Per 100g)
Calories	30
Potassium	112mg
Total fat	0.2g
Dietary fiber	0.4g
Sugar	6g
Protein	0.6g
Vitamin A	11%
Cholesterol	0mg
Vitamin C	13%
Lycopene	2.3 –mg 7.2
Potassium	112

Table.2. Nutritional content of hibiscus

Nutrients	Contents
Calories	353g
Protein	3.9g
Fat	3.9g
Fiber	15.7g
Carbohydrate	86.3g
Niacin	5.9mg
Calcium	39mg
Phosphorous	265mg
Iron	1.7mg
Ascorbic acid	3.9mg
Thymine	0.29mg

A. Nutritional Benefits

Watermelon pulp:

- Lycopene present in watermelon pulp are known for their anti-cancer effect.
- Cucurbitacin E in watermelon pulp have been investigated for its ability to inhibit tumour growth.
- They appear to reduce cancer risk by lowering insulin like growth factor (IGF).
- It lowers blood pressure improved insulin sensitivity and reduces muscle soreness.

Hibiscus extract:

- It is popular for its potential to reduce high blood pressure and cholesterol level.
- It has an effect on metabolism preventing obesity and fat build-up in the liver.
- It fights against cold.
- It also relieves constipation.

II. MATERIALS AND METHODOLOGY

A. Preparation of hibiscus extract

Hibiscus rasa-sinesis flowers are soaked into hot water. After 5-7mins remaining flower in hot water is removed. The left liquid is then filtered. Hibiscus extract is prepared.



A. Preparation of watermelon pulp

The pulp is removed from the fruit. Then the seeds are removed. The pulp is crushed and mixed well in mixer. The pulp is prepared



Fig.2. Palm sugar



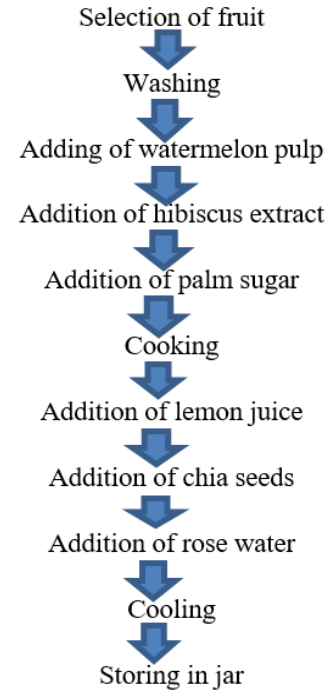
Fig.3. Chia seeds



Fig.4. Rose water



Fig.5. Lemon juice



The jar is first sterilized using boiling water. Turned off heat and then jar stand in hot water. A medium sized watermelon was made into pulp and was poured to a wide vessel and brings to a boil in a medium flame. In to the vessel 150ml hibiscus petal extract were also added. Stirred occasionally.250g of palm sugar was also added. 1tbsp of chia seeds is also added. Stirred continuously. Finally, 10ml of lemon juice is also added. Added 1tbsp of rosewater to enhance its flavor. Then the mix was stirred continuously until the water content was removed. The whole process takes for about 45mins.After 30mins the jam is cooled and stored in air tight bottle.



Fig.5. Jam in progress



Fig.6. Prepared jam

III. CONCLUSION

As this jam prepared using watermelon and hibiscus is not only tasty but also rich in nutrients. As sweetening agent used here is palm sugar which is not only tasty but also rich in nutrients. The jam is also rich in anticancer effects and lot of essential vitamins to our health and for mental strength. This jam is a nutritive bread spread. The motive of preparation of this nutritive fruit jam is to avail nutritional sweet food at all seasons and all places.

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