

From Waste to Taste: Watermelon Rind Jam

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Watermelon rind jam is a value-added food product prepared using the white or pale-green portion of watermelon rind that lies just beneath the hard, dark-green outer skin. Watermelon is a refreshing fruit that is widely consumed during summer, but its rind is often discarded as waste. Utilising this portion for jam preparation helps reduce food waste and promotes the effective use of available fruit resources. Watermelon rind jam is an example of fruit-waste utilisation and food preservation. It provides an opportunity to develop an innovative product from a part of the fruit that is commonly discarded.



Importance of Watermelon Rind Jam

Watermelon rind jam is important because it demonstrates how underutilised portions of fruits can be converted into useful and marketable food products. Instead of throwing away the rind, the edible white or pale-green portion can be processed into a sweet spread. The preparation of rind jam helps promote waste reduction, value addition, and the efficient use of raw materials. It also provides practical knowledge of food-processing techniques such as peeling, cutting, boiling, pulping, sugar addition, concentration, and packaging. Furthermore, watermelon rind contains water and dietary fibre. The addition of beetroot extract can contribute natural pigments, while sugar improves sweetness and helps develop the desired consistency. The product may also offer small-scale entrepreneurship opportunities for students and local food processors.

Objectives

- To prepare jam using the edible portion of watermelon rind.
- To utilise a commonly discarded part of watermelon and reduce food waste.
- To develop a value-added product using simple food-processing techniques.
- To understand the importance of boiling, pulping, sugar addition, and concentration in jam preparation.
- To explore the potential of watermelon rind jam as a small-scale food-processing product.

Suitable varieties: Arka jyoti, sugar baby

Ingredients Required

The following ingredients are required for preparing watermelon rind jam:

1. **Watermelon rind:** The white or pale-green portion beneath the hard, dark-green outer skin is used as the main raw material.
2. **Sugar:** Added to provide sweetness and help achieve the desired jam consistency.
3. **Beetroot:** A small piece is used to provide a reddish colour.
4. **Food colour (optional):** A permitted food-grade colour may be added if a more uniform or attractive colour is desired.
5. **Lemon juice (optional):** May be added to provide acidity and improve flavour. The quantity should be adjusted according to the formulation.

6. **Water:** Used during boiling to soften the rind.

Preparation Method

Step 1: Selection of watermelon

A large-sized, fresh, mature watermelon was selected for jam preparation. The fruit was checked to ensure that it was fresh and free from spoilage.

Step 2: Washing and peeling

The watermelon was thoroughly washed with clean water to remove dirt and surface impurities. The hard, dark-green outer skin was peeled off carefully, and the rind was separated. The white or pale-green portion immediately beneath the outer skin was retained for jam preparation.

Step 3: Cutting into small pieces

The edible rind portion was cut into small, uniform pieces. Cutting the rind into smaller pieces helped it soften more evenly during boiling and made subsequent mashing easier.

Step 4: Boiling the rind

The rind pieces were transferred to a clean vessel containing sufficient water and boiled until they became soft. Boiling helped soften the rind tissue, making it easier to mash and convert into a smooth pulp.

Step 5: Mashing and pulp preparation

After boiling, the softened rind pieces were drained, if necessary, and mashed thoroughly using a suitable utensil or mixer. The aim was to obtain a soft, uniform pulp suitable for jam preparation.

Step 6: Preparation of beetroot extract

A small piece of fresh beetroot was washed, peeled, and crushed or blended. Its extract was obtained and used to impart a reddish colour to the jam. The quantity was adjusted according to the desired colour intensity.

Step 7: Addition of sugar and colour

Sugar was added to the prepared watermelon rind pulp and mixed thoroughly. The beetroot extract was then incorporated to improve the colour. If required, a small quantity of permitted food-grade colour could be added as an alternative or supplement.

Step 8: Cooking and concentration

The mixture was heated in a clean vessel over moderate heat while stirring continuously to prevent sticking or burning. Cooking continued until the mixture thickened and developed a jam-like consistency. A small quantity of lemon juice could be added, if included in the formulation, to adjust acidity and improve flavour.

Step 9: Cooling and packaging

Once the desired consistency was obtained, the jam was removed from the heat and handled hygienically. It was transferred into clean, sterilised, food-grade jars and allowed to cool appropriately before storage. Since the shelf life of this preparation has not been established, it should be refrigerated and consumed promptly unless suitable preservation conditions have been validated.

Step 10: Final product

The prepared watermelon rind jam had a thick, spreadable consistency and a sweet taste. The beetroot extract provided an attractive reddish colour, making the product visually appealing. The jam can be served as a spread with bread, toast, or other suitable food products.

Advantages of Watermelon Rind Jam

- **Waste utilisation:** Converts a commonly discarded portion of watermelon into a useful food product.
- **Value addition:** Transforms an underutilised raw material into a processed product.
- **Simple preparation:** Can be prepared using basic kitchen or small-scale food-processing equipment.
- **Attractive appearance:** Beetroot extract can provide a natural reddish colour.
- **Versatile use:** Can be consumed as a spread with bread, toast, and other suitable foods.

- **Entrepreneurial potential:** Offers scope for product development and small-scale food-processing activities.
- **Practical learning:** Helps students understand fruit processing, pulp preparation, concentration, and hygienic packaging.

Conclusion

Watermelon rind jam is an innovative value-added product prepared from the edible white or pale-green portion of watermelon rind. The process involves washing, peeling, cutting, boiling, mashing, adding sugar and colour, and cooking the mixture until the desired jam consistency is achieved. The preparation demonstrates the importance of utilising underused fruit portions, reducing food waste, and developing new food products through simple processing methods. Beetroot extract can enhance the appearance of the jam, while appropriate formulation and processing help develop its texture and flavour. With further standardisation of ingredients, acidity, processing conditions, packaging, and shelf life, watermelon rind jam may offer potential for small-scale food-processing enterprises.