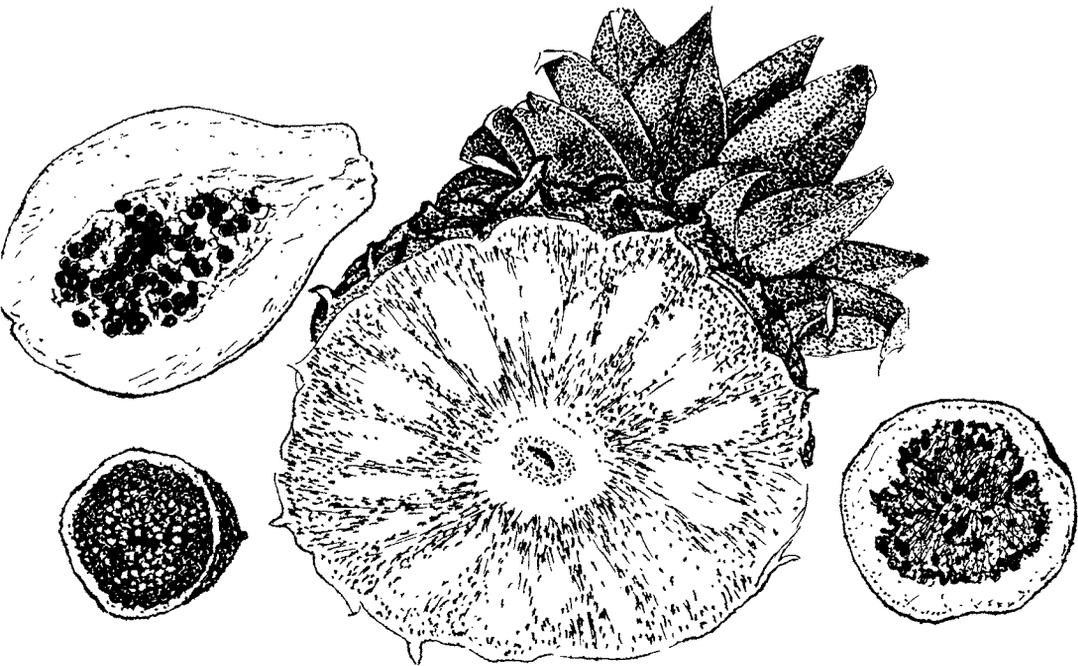


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TROPICAL FRUIT SYRUPS

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Tropical fruit juices or purees can be used in preparation of syrups to impart desirable natural flavors and colors. These tropical fruit syrups are satisfactory for use as pancake or waffle syrups, as ice cream toppings, or as similar dessert items.

Table syrups usually contain more than 65 percent by weight of sugar (maple syrup, U.S.D.A. Std.)², which makes them very resistant to microbial spoilage. To enhance their stability, it is common practice to add antifungal agents such as sodium benzoate, potassium sorbate, or combinations of antifungal preservatives. This is done to prevent spoilage after the container has been opened. Usually a container of table syrup is kept many days or weeks after it is opened, giving rise to the need for a chemical preservative.

Some fruit purees and juices tend to settle or form separate clear and cloudy layers. The appearance of a "separated" syrup is somewhat undesirable. This can be overcome by adding very small amounts of stabilizers such as gums, alginates, or cellulose derivatives.

Procedures for preparing four tropical fruit syrups are described here. Purees or juices from other tropical fruits or blends of two or more can be used equally well. To simplify the process, a constant proportion of fruit (20), water (15), liquid invert sugar (10), and

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²U.S. Standards for Grades for Table Maple Syrup. Effective 24 May 1967, Consumer and Marketing Service, U.S.D.A., Washington, D.C.

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dry sugar (60) is used. The syrup products made from this formula will have soluble solids contents of from 65.5 to 68.5 percent. This level of soluble solids renders the product very resistant to spoilage by most microorganisms. Crystallization of sugar is not likely to occur because part of the sugar used is invert. Appropriate adjustments in proportions of fruit puree and sugar can be made, if desired, to control very precisely the final content of soluble solids in the product; 67 percent soluble solids is a desirable level to achieve. However, the range noted above is satisfactory for these syrup products. Citric acid is added to the papaya syrup to adjust the acidity to about pH 4. This is necessary to permit mild heat treatment (190°F.) in the subsequent pasteurization of the product. Guava, passion fruit, and pineapple are sufficiently high in acidity so that citric acid need not be added to them. Stabilizer and preservative are in such small amounts that they do not alter the final solids content by more than 0.1 percent.

For greatest ease in preparation, the steps should be done in the order suggested. The instructions are for preparation of 105 pounds of syrup.

PAPAYA SYRUP

- 15 lb. Water
 - 4 oz. Kelcoloid DH (or other stabilizer)
 - 20 lb. Papaya puree
 - 3 oz. Citric acid
 - 0.8 oz. Sodium benzoate (22.5 g.)
 - 0.15 oz. Potassium sorbate (4 g.)
- Add these ingredients while stirring and heating to 150°F.*
- 10 lb. Invert sugar
 - 60 lb. Sugar

Add the sugar slowly while continuing the heating and stirring; heat to 190°F.; fill hot into cans or glass containers; seal and invert the container for 3 minutes to sterilize the lid. Cool in running water bath for 15 minutes, or until temperature of syrup in center of can is 100°F.

GUAVA SYRUP

15 lb. Water

20 lb. Guava puree

4 oz. Gum arabic (or other stabilizer)

0.8 oz. Sodium benzoate (22.5 g.)

0.15 oz. Potassium sorbate (4 g.)

Mix these ingredients with a power stirrer in a steam-jacketed kettle, while raising the temperature to 150°F.

10 lb. Invert sugar

60 lb. Sugar

Add the sugar slowly while continuing the heating and stirring; heat to 190°F.; fill hot into cans or glass containers; seal and invert the container for 3 minutes to sterilize the lid. Cool in running water bath for 15 minutes, or until temperature of syrup in center of can is 100°F.

PASSION FRUIT SYRUP

15 lb. Water

8 oz. Gum tragacanth (or other stabilizer)

Mix in steam-jacketed kettle with power stirrer; about 3 minutes is sufficient.

20 lb. Passion fruit juice

0.8 oz. Sodium benzoate (22.5 g.)

0.15 oz. Potassium sorbate (4 g.)

Add these ingredients while stirring and heating to 150°F.

10 lb. Invert sugar

60 lb. Sugar

Add the sugar slowly while continuing the heating and stirring; heat to 190°F.; fill hot into cans or glass containers; seal and invert the container for 3 minutes to sterilize the lid. Cool in running water bath for 15 minutes, or until temperature of syrup in center of can is 100°F.

PINEAPPLE SYRUP

15 lb. Water

20 lb. Pineapple juice

8.0 oz. Kelcoloid DH (or other stabilizer)

0.8 oz. Sodium benzoate (22.5 g.)

0.15 oz. Potassium sorbate (4 g.)

Mix these ingredients with a power stirrer in a steam-jacketed kettle, while raising the temperature to 150°F.

10 lb. Invert sugar

60 lb. Sugar

Add the sugar slowly while continuing the heating and stirring; heat to 190°F.; fill hot into cans or glass containers; seal and invert the container for 3 minutes to sterilize the lid. Cool in running water bath for 15 minutes, or until temperature of syrup in center of can is 100°F.

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