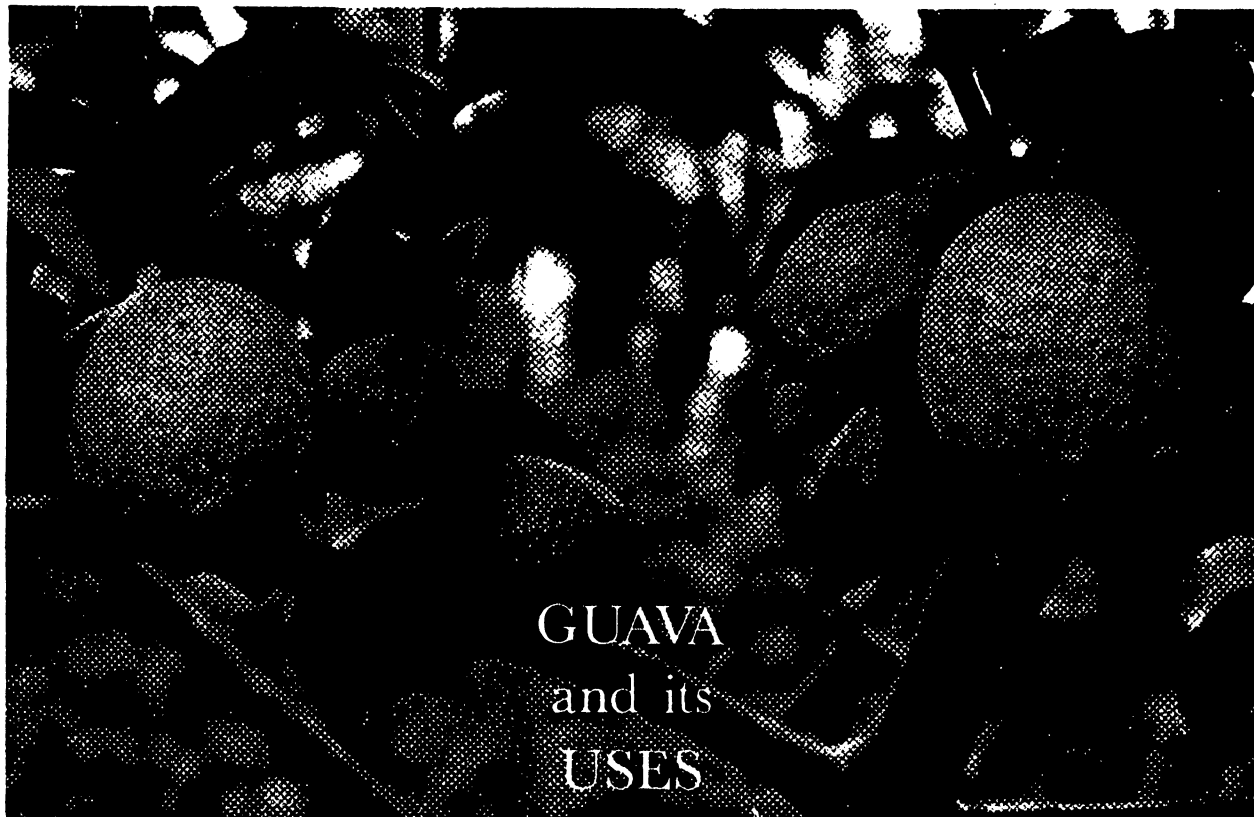


COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS  
COLLEGE OF TROPICAL AGRICULTURE, UNIVERSITY OF HAWAII · U. S. D. A. COOPERATING



BY KATHRYN J. ORR (Retired)  
Specialist in Foods and Nutrition

Guava is the most common wild fruit in the State of Hawaii. Sereno E. Bishop, a clergyman born at Kailua, Hawaii, in 1824 states in *Reminiscences of Old Hawaii* that guavas were a choice fruit in the later 1830's and did not become wild until 20 years later. Because of their high vitamin C content, many guavas have been analyzed to obtain the best varieties for future cultivation. The Horticulture Department of the Hawaii Agricultural Experiment Station has been planting and selecting improved guava strains since 1951. Combinations of native fruits and seeds and plants from Africa and the Philippines seem the most promising.

The fruit of the guava may be round or oblong in shape, with a tender, white, yellow or green skin, even when ripe. The flesh varies from white to deep pink, or yellow to salmon red. Guavas may be sweet, mildly acid or very acid, and contain many small seeds. The fruit ranges from the size of a macadamia nut to that of an apple or pear.

#### Food Value

Studies made in Hawaii indicate that the thick rind portion of the common guava contains more ascorbic acid than the pulp and seeds. Compared with other fruits, whole guavas are an excellent source of vitamin C, a poor source of vitamin A, riboflavin and thiamine and the minerals calcium, phosphorus and iron.

This publication was assumed to be correct at the date of its issue, but it may no longer represent the most up-to-date information on its subject. In particular, if this publication contains information about pesticide uses, the products mentioned may not currently be licensed for sale in Hawaii or labeled for the uses described.

*Factors that influence the vitamin content of prepared guava products:*

1. The original ascorbic acid content of the guavas .
2. The quantity of water used in preparation of the product.
3. Contact or contamination with metals, especially copper, which tends to destroy the vitamin.
4. Exclusion or inclusion of air.
5. Length of storage.
6. Contact with light.

*To obtain guava juice and pulp of high vitamin content, the following recommendations are made:*

1. Use guavas of good quality at the height of the fall season, and prepare them as soon after picking as possible.
2. Use aluminum, stainless steel, or enamel kettles that are not chipped, for cooking.
3. Cook sliced guava in enough water to just cover them.
4. Use a strainer free from copper or rust for draining the pulp (an aluminum or enameled colander is satisfactory if followed by a poi cloth for pulp or a jelly bag for juice).
5. Fill the bottle or container to be used for canning to the very top with the boiling hot product before putting on the cover or cap (the space at the top is then a vacuum and not air containing oxygen).
6. Put juice in dark bottles if you cannot store them away from light.

## WAYS OF USING COMMON GUAVAS

### I. Preserving Guavas

*Extraction of guava juice for jelly.*

Select half-ripe, sour guavas; wash, remove blossom end, and blemishes. Slice or cut into quarters. Add 3/4 pound (1-1/2 cups) water to each pound of guavas. This amount of water should almost cover the guavas. Boil for about 20 minutes. Strain through a flannel jelly bag. Do not squeeze bag in extracting the juice. If desired, a second extraction of juice may be made from the same pulp by adding water and boiling again. The second extraction will have almost as much pectin but not so much acid as the first. When jelly is being made, a small amount of lemon juice may be added to increase the acid.

### GUAVA JELLY

(Yield: Approximately 2-1/2 pints)

Put 4 cups of strained guava juice in a 6 or 8 quart aluminum saucepan. Boil 8 to 10 minutes before adding sugar. Then add 4 cups sugar. Cook rapidly to calculated jelly temperature or until mass of three or four drops run together and "sheet" off the spoon.

When using a jelly, candy or deep-fat thermometer, the U.S.D.A. recommends this procedure: First take the temperature of boiling water with the thermometer. It will vary with the altitude at which you live as well as with the atmospheric conditions. Then cook the jelly mixture to a temperature 8°F. higher than the boiling point of water. (For example; if water boils at 210°F., add 8°F. and jelly would cook to 218°F.) At that point the concentration of sugar will be such that the mixture of fruit juice and sugar should form a satisfactory gel.

For accurate thermometer reading, have the thermometer in a vertical position and read at eye level. The bulb of the thermometer must be completely covered with the jelly mixture. As soon as the jelly cook temperature is reached, remove the jelly from the fire and pour into hot, sterilized jelly glasses. Allow jelly to cook for 1 to 2 minutes, then skim. Seal with paraffin.

#### GUAVA JUICE

(Yield: 1-1/2 quarts)

4 pounds or 48 to 50 medium-sized, firm, ripe guavas

1 pound or 2 cups of water (barely sufficient to cover sliced guavas)

Wash, remove blossom end, and cut guavas into slices. Add water, bring to boiling point quickly, and boil gently for 15 minutes. Strain through a flannel jelly bag or two thicknesses of a sugar or flour sack. Heat juice to boiling point, pour into hot, sterile jars and seal, or pour into bottles and immediately cap with a commercial capper. Juice not canned will keep approximately a week in a refrigerator. The juice may also be frozen and used for punch or breakfast fruit juice.

Juice may be frozen unsweetened or sweetened. Sweetening is the method usually preferred. Sugar added in the proportion of 1 part to 8 parts of juice has given the most acceptable product after being frozen.

#### GUAVA BUTTER

(Yield: 1-1/4 quarts)

8 cups cooked guava pulp  
(pulp left from jelly making  
may be used)

6 cups sugar

6 tablespoons lemon juice (2 lemons)  
3 tablespoons grated fresh ginger root  
3/4 teaspoon ground allspice  
3/4 ground cinnamon

Press guava pulp through a sieve before measuring the quantity. Add remaining ingredients. Cook slowly until thick, stirring frequently to prevent burning. Pour into hot, sterilized jars. Cool and cover with paraffin.

#### GUAVA-PAPAYA JAM

(Yield: 1-1/2 quarts)

4 cups cooked sieved guava pulp

4 cups fresh papaya pulp

Grated rinds of 2 lemons

8 cups sugar

1/4 cup lemon juice

Combine fruit pulp and cook until most of the water has been evaporated. Add sugar and lemon and cook until thick. Pour into hot, sterile jars. Cool, then seal with paraffin.

## GUAVA-PINEAPPLE MARMALADE

(Yield: 1-1/4 pints)

4 cups sliced guava shells (about 25 guavas)	1/4 cup thinly sliced lemon or
3-1/2 cups of sugar	3-1/2 tablespoons lime juice
3/4 teaspoon finely chopped fresh ginger root	2 cups shredded fresh pineapple 1 cup water

Wash guavas, remove blossom end and blemishes. Cut fruit into halves. Remove soft inner pulp and seeds with a spoon and use this pulp for guava jam or butter. Cut guava shells into strips 1/3-inch wide, cover with sugar, add water and allow to stand 3 to 4 hours. Add ginger root, lemon and pineapple. Boil until sirup is slightly thick, but not until it gives a jelly test. Pour into hot, sterile jars and seal at once.

### II. Preserving by Freezing

Guavas may be frozen successfully in several forms. Raw puree prepared from the pulp and seeds, from the shells, or from both combined, and halved or sliced shells, retain the fresh guava flavor. Whole guavas frozen do not make a desirable product. Recent experimental studies made at the University of Hawaii on the retention of vitamin C in frozen guava juice and guava puree have shown that 75 to 90 percent of the vitamin C present in the fresh product was retained during freezing and storage at 0°F. for one year.

#### RAW GUAVA PUREE

1. From seeds and pulp. --Remove the seedy portion from cut halves of ripe guavas with a spoon and put it through a strainer to remove seeds.
2. From whole guavas. --Cut or mash ripe guavas and put them through a sieve or strainer to produce a puree.

For either product, add 1 part of sugar to 4 or 5 parts of puree according to sweetness desired. Mix thoroughly, package and freeze.

#### RAW GUAVA SHELLS

Use only large, ripe, tender guavas. These may be frozen as halves or slices for salads or desserts. The pared shells produce a less grainy and more desirable product than unpared. Combine 1 part sugar to 4 parts guava shells, package, and freeze. Or, use a sirup made in the proportion of 2 cups of water and about 1/2 cup sugar to cover the shells in the package. The amount of sugar used will depend upon the family's taste.

#### COOKED GUAVA SAUCE

Use large, ripe guavas. Slice the shells in 1/4-inch slices and cook until just tender in a sirup using about 1-1/4 cups sugar to each 2 cups of water. Remove from heat, cool, and pour the sauce into cartons, cover with sirup in which shells were cooked, close cartons, and freeze. If desired, 1/4 to 1/2 teaspoon fresh ginger juice, or 1/2 teaspoon lemon juice, may be added to the cooked sauce before freezing.

### III. Desserts and Toppings

#### GUAVA DUMPLINGS

(Yield: 8 servings)

12 full ripe sour guavas*	3 tablespoons sugar
1-1/2 cups sugar	1/2 cup shortening
1/8 teaspoon salt	1 cup milk (about)
1 teaspoon cinnamon	1/2 to 3/4 cup brown sugar, firmly packed
1/8 teaspoon nutmeg	1/3 cup margarine or butter
3 cups sifted flour	Dash of salt
4 teaspoons double-acting baking powder	2 cups boiling water
1 teaspoon salt	2 tablespoons margarine or butter

Wash fruit, remove any blemishes, cut into halves, scoop out pulp, and press through sieve. Add sugar, salt, cinnamon and nutmeg and let stand while preparing dough portion.

Measure sifted flour, add baking powder, salt and 3 tablespoons sugar and sift again. Cut shortening into sifted ingredients until mixture looks like coarse meal. Add milk, mixing until a soft dough is formed.

Knead dough on lightly floured board half a minute. Divide dough in half. Roll each half 1/8-inch thick, forming 10-inch squares. Then cut each into four 5-inch squares.

Place 3 half shells of guava, in center of each square. Fill with pulp. Dot with margarine. Moisten edges of dough with water and bring corners up over guava shells pressing edges together. Place in a greased 13 x 9-inch baking pan with joined edges either on top or underneath the dumplings.

Mix together the brown sugar, butter, salt and water; bring to a boil. Pour over dumplings in pan. Bake in a moderate oven (375°F.) for 35 to 40 minutes, or until guava shells are tender. Serve warm with guava topping or tablecream or both.

\*May substitute sweet guavas, but add 4 tablespoons lemon juice to sieved pulp.

#### GUAVA TOPPING SAUCE

(Yield: about 3 cups)

1 6 ounce can frozen guava nectar	1/8 teaspoon salt
2 tablespoons cornstarch	2 tablespoons margarine or butter
2-1/4 cups water	1/2 teaspoon cinnamon (optional)

In a saucepan, combine cornstarch and salt; slowly add the water to make a smooth paste. Stir thawed guava puree into cornstarch mixture until smooth. Cook over low heat, stirring constantly, until mixture thickens. Add margarine. Serve lukewarm over guava dumplings or cold over ice cream.

## GUAVA WHIP ICEBOX CAKE

(Yields 6 to 8 servings)

1 package of ladyfingers	1 egg white
1 package lemon-flavored gelatin	1 small flat can crushed pineapple, drained
1 cup boiling water or pineapple juice made up to one cup	Whipped cream topping
1 6 ounce can frozen guava nectar (make up to 1 cup with cold water)	1/2 cup fresh grated coconut Cinnamon (optional)

Lightly oil a standard size pyrex loaf (5 x 9) and decorate sides and bottom with split lady fingers. Set aside. Dissolve gelatin in boiling water or water-pineapple juice mixture. Add enough cold water to 6-ounce can of thawed guava nectar to make to 1 cup. Combine with gelatin and crushed pineapple and mix thoroughly. Chill until stiff.

Beat egg white stiff but not dry. Whip chilled guava mixture until light pink-colored and fluffy. Gently fold whipped guava into beaten egg white. Mix carefully. Spoon the guava-egg white mixture into the loaf pan lined with ladyfingers. Try not to disturb the ladyfinger design. Chill in refrigerator until firm (4 to 6 hours).

To serve, unmold on platter trimmed with greens. Washed and polished hibiscus leaves are attractive. Decorate gelatin mold with whipped cream topped with fresh grated coconut or a light dusting of cinnamon.

To serve, cut into 1-inch thick slices.

## GUAVA DELICIOUS

(Yield: 6 servings)

8 large ripe guavas	1/2 cup whipping cream or
1 large ripe banana	1 cup grated coconut
3/4 cup sugar	

Select soft, ripe guavas. Wash, peel and cut in halves. Scoop out the pulp and press through a coarse sieve to remove the seeds. Measure pulp (there should be approximately 3/4 cup) and add sugar. Slice the guava shells in 1/3-inch pieces and the banana in thin pieces.

Place a layer of guavas in a serving dish and cover with sliced bananas. Continue filling dish with alternating layers of guava and banana until fruit has all been used. Pour pulp over the top, cover dish, and chill for 2 to 3 hours. Serve with whipped cream or grated coconut on top.

## **GUAVA MILK SHERBET**

(Yield: 1-1/4 quarts)

2-1/4 cups canned unsweetened guava juice (No. 2 can)	1-1/4 cups thin cream or evaporated milk
1-1/8 cups sugar	2 egg whites
2 tablespoons lemon or lime juice	1/16 teaspoon salt

Boil 1 cup guava juice and 1 cup sugar together for 3 minutes. Cool and add the remaining guava and lemon juice. Place this mixture in a mechanical refrigerator tray and allow it to freeze. Remove the guava mixture to a chilled mixing bowl and beat with an egg beater until the mixture is fluffy. Add the cream and fold in the stiffly beaten egg whites to which the salt has been added. Pour the sherbert into the refrigerator tray and freeze.

## **GUAVA CHIFFON PIE**

(Yield: 9-inch pie--6 to 8 servings)

1 baked pie shell or crumb crust	3 to 4 tablespoons lemon or lime juice
1 tablespoon unflavored gelatin	1/4 cup guava juice
1/4 cup water	4 egg whites
1 cup sugar	1/8 teaspoon salt
2/3 cup strained guava pulp (unsweetened)	1/2 cup sweetened whipped cream, if desired
4 egg yolks	

Sprinkle gelatin over cold water and let stand 5 minutes. Combine 1/2 cup sugar, guava pulp, and egg yolks. Beat until well mixed. Cook over hot water, stirring constantly, until it thickens. Add gelatin, remove from heat, and stir until thoroughly combined. Cool and add fruit juice.

When guava mixture begins to congeal, beat egg whites and salt until stiff; add 1/2 cup sugar and beat until glossy. Gently fold guava mixture into beaten egg whites, pour into pie shell, and place in refrigerator to chill. Before serving filling may be spread with whipped cream sweetened to taste.

## **IV. Punch**

### **FRUIT PUNCH**

(Yield: 100 servings of 1/3 cup each)

1 fresh ginger root (1 finger size)	6 cups guava juice
7 cups water	9 cups fresh pineapple juice
7 cups sugar	10 cups orange juice (4 dozen small-sized oranges)

Peel ginger root and chop fine. Boil with 3 cups of the water until a strong ginger flavor is obtained. Cool and strain through a cloth, squeezing the ginger root. Boil the sugar and the remaining 4 cups of water to make a sirup, then cool. Combine all ingredients and pour over cracked ice. If the punch is too strong, dilute with cold water.

## V. Candy

### GUAVALETS

(Yield: 1-3/4 pounds)

2 cups strained cooked guava pulp (may use pulp left from jelly juice)	1 teaspoon unflavored gelatin 2 tablespoons cold water 1/2 cup chopped walnuts
3-1/2 cups sugar	

Cook pulp and sugar together over very slow heat until mixture is very thick and seems to leave sides of pan. Stir frequently to prevent burning. Soak gelatin in cold water for 5 minutes, melt over hot water, and add to guava pulp. Remove from heat, cool, add nuts, and pour into buttered shallow pan. When cold, cut into 1-inch squares and wrap each piece in waxed paper or roll in mixture of confectioners' sugar and corn starch.

---

#### References

- Fenton, Faith, Orr, Kathryn J., and Miller, Carey D. *Home Freezing in Hawaii*. Agricultural Experiment Station Circular 47, October, 1955.
- Miller, Carey D., Bazole, Katherine, and Bartow, Mary. *Fruits of Hawaii* University of Hawaii Press, 1955.
- Orr, Kathryn J., and Miller, Carey D. *The Loss of Vitamin C in Frozen Guava Puree and Juice*. Agricultural Experiment Station Progress Notes No. 98, January, 1954.