

HOW TO MAKE

JELLIES · JAMS · PRESERVES · MARMALADES · BUTTERS

AT HOME

TEXAS AGRICULTURAL EXTENSION SERVICE

THE TEXAS A&M UNIVERSITY SYSTEM

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This publication is to be used in connection with USDA Home and Garden Bulletin No. 56, "How to Make Jellies, Jams and Preserves at Home."

how to make

Jellies, Jams, Preserves, Marmalades and Butters

at home

COMPILED BY
EXTENSION FOODS AND NUTRITION SPECIALISTS
THE TEXAS A&M UNIVERSITY SYSTEM

TEST THE JUICE FOR PECTIN

Home methods have not been developed for determining with accuracy how much pectin there is in fruit juice. The following tests may be used only as an approximate guide as to the amount of pectin present in the fruit juice.

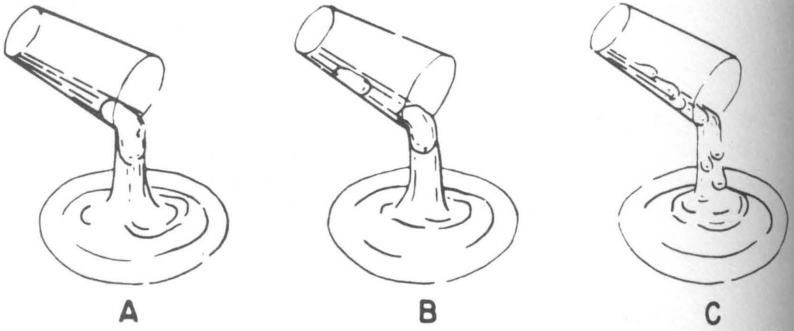
Epsom Salts Test

2 tablespoons cool fruit juice

2 teaspoons sugar

1 tablespoon Epsom salts

1. Add sugar to fruit juice.
2. Add Epsom salts and stir until all is dissolved. Let stand 5 minutes.
3. If a solid mass of jelly forms, the juice is rich in pectin and has given an excellent pectin test (figure A). Use 1 cup of sugar to 1 cup of juice in jelly recipes.
4. If several small particles of jelly-like materials form, the juice is only moderately rich in pectin and has given a moderate pectin test (figure B). Use $\frac{3}{4}$ cup sugar to 1 cup of juice in jelly recipes.
5. If many small pieces form, the juice is a poor source of pectin and has given a poor pectin test (figure C).



Alcohol Test

2 tablespoons cool fruit juice

2 tablespoons denatured alcohol (poison—do not taste)

1. Pour denatured alcohol into a small container and add cool fruit juice.

2. If a solid mass of jelly forms, the juice is rich in pectin and has given an excellent pectin test (figure A). Use 1 cup of sugar to 1 cup of juice in jelly recipes.

3. If several small particles of jelly-like materials form, the juice is only moderately rich in pectin and has given a moderate pectin test (figure B). Use $\frac{3}{4}$ cup sugar to 1 cup of juice in jelly recipes.

4. If many small pieces form, the juice is a poor source of pectin and has given a poor pectin test (figure C).

If the tests indicate juice is a poor source of pectin, commercial pectin can be added for making jelly, or the juice can be used in other ways.

TEST THE JUICE FOR ACID

If there is doubt as to whether the juice contains sufficient acid for jelly, test as follows: Mix 1 teaspoon of lemon juice with 9 teaspoons of water in a cup. Compare the taste of this with the juice to be tested. If the fruit juice is as tart as the diluted lemon juice, it will make satisfactory jelly. In tasting for acid, disregard fruit flavor and concentrate on acidity.

If the fruit juice is low in acid, add strained lemon juice or powdered citric acid. One tablespoon of lemon juice for each cup of the fruit juice, or 1 to $1\frac{1}{2}$ teaspoons of the powdered citric acid for 6 cups of juice generally will give sufficient acidity. Syrup that has failed to make jelly because of lack of acidity may be cooked again. Add lemon juice or citric acid and cook until jelly test is obtained.

JELLY

Cranberry Jelly

4 cups cranberry juice (use 1 to 3 cups water to make juice)

1 pound cranberries

3 cups sugar

● *TO PREPARE JUICE.* Select a mixture of slightly under-ripe and ripe cranberries. Wash quickly and carefully in a colander. Drain, remove stems. Put fruit and water in a broad flat-bottomed pan. Boil 5 to 10 minutes. Stir to prevent scorching. Pour hot, cooked fruit into a jelly bag. Let the juice drip into a bowl. When the dripping has almost ceased, press the jelly bag to obtain all the juice. Re-strain the juice through a fresh wet bag. Do not press bag. Test for pectin and acid.

● *TO MAKE JELLY.* Heat the fruit juice and sugar quickly to boiling using a large flat-bottom pan that permits rapid evaporation; stir only until the sugar is dissolved. Boil rapidly until jelly stage is reached. Pour into hot, dry, sterilized glasses; seal with paraffin, label and store.

JAMS

Peach Jam

1 pound peaches

$\frac{3}{4}$ to 1 pound sugar

● *TO PREPARE FRUIT.* Select well-ripened, soft-fleshed peaches. Wash fruit carefully. Dip into boiling water for about half a minute or until the skins slip easily. Plunge at

once into cold water for a few seconds; remove the skins, cut the fruit into halves and discard the seeds. Crush the fruit.

● *TO MAKE JAM.* Combine the crushed fruit with the sugar in alternate layers and let stand 3 to 4 hours or until some of the juice is extracted. Heat slowly until the sugar is dissolved. Bring to boiling and cook, stirring constantly, until the jam is clear and somewhat thick. Pour into hot, dry, sterilized jars to one-fourth inch of top if paraffin is to be used; otherwise, fill to top. Seal, label and store.

Plum Jam

1 pound plums

1 cup water

$\frac{3}{4}$ pound sugar

● *TO PREPARE FRUIT.* Select well-ripened and soft-fleshed plums of tart variety. Wash the fruit and drain. Boil plums in the water for 10 to 15 minutes, or until the skins are tender.

● *TO MAKE JAM.* Add the sugar and stir while boiling until the jelly stage is reached. Pour into hot, dry, sterilized jars to one-fourth inch of top if paraffin is to be used; otherwise, fill to top. Seal, label and store.

PRESERVES

Fig Preserves

1 gallon prepared figs

2 quarts sugar

1 lemon

● *TO PREPARE FRUIT.* Select only perfect figs, ripe but not soft. Leave 1/8-inch stem. Wash. To remove the fuzz, sprinkle 1 cup soda over 6 quarts sound figs and add 1 gallon boiling water. Let stand 5 minutes. Drain and wash thoroughly in cold water.

● *TO MAKE PRESERVES.* Place alternate layers of sugar and figs in an enamel or aluminum kettle. Let stand overnight. Drain off syrup and bring it to a boil. Drop in figs a few at a time. Cook until tender, transparent and amber colored (about 1 to 1½ hours).

Add juice of lemon. Cook 10 minutes longer. Remove figs from the syrup. Fill hot, dry, sterilized jars three-fourths full with preserved fruit. Cook syrup until thick. If paraffin is to be used, add enough syrup to fill the jar to one-fourth inch of the top; otherwise, fill to the top. Seal, label and store.

Peach Preserves

1 pound prepared peaches
¾ to 1 pound sugar

● *TO PREPARE FRUIT.* Select any variety of white or yellow peach of good dessert quality at firm ripe stage. Wash and pare the peaches. Leave whole or cut into uniform pieces such as halves, quarters or eighths.

● *TO MAKE PRESERVES.* Combine the sugar and fruit in alternate layers in a container. Let

stand 8 to 10 hours or overnight before cooking, or add the sugar and ¼ cup water for each pound of fruit and cook at once. In either case, stir carefully while heating to boiling. Cook until the syrup is somewhat thick, stirring occasionally to prevent burning. Fill hot, dry, sterilized jars three-fourths full with the preserved fruit. If paraffin is to be used, add enough syrup to fill the jar to one-fourth inch of the top; otherwise, fill to top. Seal, label and store.

Pear Preserves

1 pound prepared pears
¾ to 1 pound sugar

● *TO PREPARE FRUIT.* Select pears that hold their shape and have a good flavor. The Keiffer pear is a variety commonly used. Allow fruit to reach the firm ripe stage. (Store Keiffer pears 2 or 3 weeks at 60 degrees to 65 degrees F before using, for best quality in making preserves.) Wash, pare and cut fruit into uniform pieces such as quarters or eighths, depending on size of the fruit; then core.

● *TO MAKE PRESERVES.* Combine the fruit and sugar in alternate layers in a container and let stand 8 to 10 hours or overnight before cooking, or cook at once with sugar and ¼ cup of water to a pound of fruit. Stir carefully while heating to boiling. Cook until the syrup is somewhat thick, stirring occasionally to prevent burning. Fill

hot, dry, sterilized jars three-fourths full with the preserved fruit. If paraffin is to be used, add enough syrup to fill the jar to one-fourth inch of the top; otherwise, fill to top. Seal, label and store.

Pineapple Preserves

2 pounds prepared pineapple

(6 cups)

3 cups sugar

1 cup water

● *TO PREPARE FRUIT.* Slice pineapple, pare, remove eyes and core. Cut in small cubes or grate.

● *TO MAKE PRESERVES.* Put sugar, fruit and water into a preserving kettle and cook 20 minutes. Fill hot, dry, sterilized jars three-fourths full with the preserved fruit. If paraffin is to be used, add enough syrup to fill the jar to one-fourth inch of the top; otherwise, fill to top. Seal, label and store.

Plum Preserves

1 pound prepared plums

$\frac{3}{4}$ to 1 pound sugar

$\frac{1}{2}$ cup water

● *TO PREPARE FRUIT.* Wash the fruit, drain and prick each plum in three or four places.

● *TO PREPARE PRESERVES.* Dissolve the sugar in the water and bring to boiling. Add the plums and boil gently until the fruit is clear and tender and the syrup sheets from a spoon. Fill hot, dry, ster-

ilized jars three-fourths full with the preserved fruit. If paraffin is to be used, add enough syrup to fill the jar to one-fourth inch of the top; otherwise, fill to top. Seal, label and store.

Strawberry Preserves

1 pound prepared strawberries

$\frac{3}{4}$ pound sugar

● *TO PREPARE FRUIT.* Select firm, tart berries. Wash, drain and remove caps.

● *TO PREPARE PRESERVES.* Sprinkle sugar over fruit. Cook immediately. Boil 10 minutes. Stir to prevent scorching. Pour into a flat pan and let stand about 8 hours or overnight. Drain berries. Fill hot, sterilized jars three-fourths full with the preserved fruit. If syrup is thin, boil until thick or to desired consistency. Pour enough syrup over the fruit to fill the jars to one-fourth inch of the top. Cover with paraffin; seal at once. Label and store.

Tomato Preserves

1 pound prepared tomatoes

$\frac{3}{4}$ pound sugar

$\frac{3}{4}$ cup water

$\frac{1}{4}$ lemon, thinly sliced

1 piece gingerroot

● *TO PREPARE FRUIT.* Select small, firm, yellow or red tomatoes. Wash and drain. If a tomato preserve without skins is desired, dip the tomatoes into boiling water, then into cold water and remove

the skins. Handle the tomatoes carefully.

● *TO PREPARE PRESERVES.* Boil the lemon 5 minutes in $\frac{1}{4}$ cup of the water. Boil the remainder of the water with the sugar for 5 minutes to make a syrup. Add the tomatoes, gingerroot, lemon and liquid in which lemon was cooked. Boil until the tomatoes are clear and the syrup somewhat thick. Remove the scum. Fill hot, dry, sterilized jars three-fourths full with the preserved fruit. If paraffin is to be used, add enough syrup to fill the jar to one-fourth inch of the top; otherwise, fill to top. Seal, label and store.

Watermelon Rind Preserves

First Part

4 pounds prepared watermelon rind
2 tablespoons lime (calcium oxide)
2 quarts water

Second Part

4 quarts water (16 cups)
4 pounds sugar (approximately 8 cups)
2 lemons, thinly sliced
4 small pieces gingerroot (optional)

● *TO PREPARE RIND.* Select thick watermelon rind and trim off the outer green skin and the pink flesh. Cut the rind into $\frac{1}{2}$ - or 1-inch cubes and weigh. Combine lime and water. Add the rind to the lime water and let stand for 1 hour to make it crisp. Drain and place in clear water for 1 hour. Drain and boil for $1\frac{1}{2}$ hours in fresh water. Drain again.

● *TO PREPARE PRESERVES.* Boil the lemon 5 minutes in $\frac{1}{2}$ cup water. Boil remainder ($15\frac{1}{2}$ cups) of water with the sugar 5 minutes to make a syrup. Add the watermelon rind and gingerroot to the syrup. Boil 1 hour. When the syrup thickens, add the lemon and the water in which it was cooked. Continue to boil until the syrup is thickened and the rind is clear. Stir to prevent sticking. Fill hot, dry, sterilized jars three-fourths full with the preserved fruit. If paraffin is to be used, add enough syrup to fill the jar to one-fourth inch of the top; otherwise, fill to top. Seal, label and store.

MARMALADES

Amber Marmalade

1 orange
1 grapefruit
1 lemon
 $\frac{1}{8}$ teaspoon salt
Sugar
Water

● *TO PREPARE FRUIT.* Select smooth, thick-skinned fruit, free from blemishes. Remove the peel, slice very thin. Add 1 quart water and parboil 5 minutes. Drain off water, add a quart of fresh water; parboil again and drain. Repeat this step for a third time. Drain. Cut fruit pulp into thin slices and remove seeds and rag.

● *TO PREPARE MARMALADE.* Combine the sliced pulp with the drained, parboiled peel and measure. To each packed measure of this

mixture, add twice that quantity of water and boil rapidly about 40 minutes. Weigh or measure and add equal weight or measure of sugar. Add salt. Boil the fruit and sugar mixture rapidly 25 minutes, or until it thickens and becomes amber colored. Stir to prevent scorching. Let stand in kettle until slightly cool so that the shreds of peel will be distributed uniformly throughout the jellied juice. Fill hot, dry, sterilized jars to one-fourth inch of top if paraffin is to be used; otherwise, fill to top. Seal, label and store.

Sweet Orange Marmalade

4 oranges
4 lemons or limes
1/8 teaspoon salt
Water
Sugar

● *TO PREPARE FRUIT.* Select fruit with smooth, thick skins free from blemishes. Wash fruit, remove the peel and slice thin. Cover sliced peel with cold water. Boil until tender, adding more water as it boils away. Change water frequently if bitter flavor is objectionable. Cut fruit pulp into thin slices. Remove seed and rags.

● *TO PREPARE MARMALADE.* Combine the sliced pulp and the parboiled peel. To each packed measure of mixed fruit pulp and parboiled peel, add twice that quantity of water and 1/8 teaspoon salt. Boil rapidly 25 minutes. Weigh or measure this mixture and to it add

an equal weight or measure of sugar. Boil 15 minutes or until jelly stage is reached. Cool slightly, stir, and pour into hot, dry, sterilized jars to one-fourth inch of top of jar if paraffin is to be used; otherwise, fill to top. Seal, label and store.

Green Tomato Marmalade

4 pounds prepared green tomatoes
2 pounds sugar
1/2 teaspoon salt
5 lemons
Water

● *TO PREPARE THE FRUIT.* Wash green tomatoes. Trim and cut into small pieces or slices. Peel the lemons; cut the peel into thin slices and boil 5 minutes in 1 cup water. Discard the water and repeat the parboiling if the bitter flavor in the lemon peeling is not desired. Drain. Slice the lemon pulp and remove the seeds.

● *TO PREPARE MARMALADE.* Combine the tomatoes, sugar, salt, sliced lemon and drained peel. Heat slowly and stir until the sugar is dissolved. Continue stirring and boil 1 hour or until the mixture is somewhat thick and the fruit is clear. Pour into hot, dry, sterilized jars to one-fourth inch of top of jar if paraffin is to be used; otherwise, fill to top. Seal, label and store.

Grapefruit Marmalade

3 grapefruit
1/4 cup lemon juice
Water
Sugar

● *TO PREPARE FRUIT.* Wash and remove peel from grapefruit. Cut peel into thin slices. Add 5 pints of water to the sliced peel and boil 5 minutes. Drain. Add 5 pints of fresh water; boil another 5 minutes and drain again. Repeat for a third time. Drain. Remove seed and rags from the fruit pulp. Cut into small pieces.

● *TO PREPARE MARMALADE.* Add fruit pulp to the boiled peel. Measure and add twice as much water as fruit and peel. Boil rapidly 40 minutes. Measure or weigh fruit and add equal measure or weight of sugar; add lemon juice and boil rapidly to jelly stage, stirring frequently. Pour into hot, dry, sterilized jars to one-fourth inch of top if paraffin is to be used; otherwise, fill to top. Seal, label and store.

BUTTERS

Fruit butters are made from the fruit pulp cooked with sugar until the mixture has a uniform, thick consistency that is soft enough to spread easily when cold. Proportions and methods of preparation for apple, peach, grape, pear and plum butter are the same. Only the preparation of the fruit varies; therefore, preparation for each fruit is given but only one recipe and one method since they can be used with any of the fruits.

● *TO PREPARE APPLE PULP.* Select sound, ripe, tart apples. Wash the apples, peel and slice. Use equal measure of fruit and sweet cider, or a mixture of half sweet cider and half water. Cook until the fruit is soft, stirring constantly. Press through a colander, then through a fine sieve to remove all fibrous material and give a smooth consistency.

● *TO PREPARE PEACH PULP.* Select sound, ripe fruit. Wash the fruit thoroughly. Scald; remove skins and seeds. Crush fruit and cook in the juice until soft, stirring constantly. Press through a colander and then through a fine sieve

to remove all fibrous material and to give a smooth consistency.

● *TO PREPARE GRAPE PULP.* Select sound, ripe grapes. Wash thoroughly. Remove from stems; crush and cook in the juice. Cook until soft, stirring constantly. Press through a colander, then through a fine sieve to remove all fibrous material and give a smooth consistency.

● *TO PREPARE PEAR PULP.* Select sound, ripe fruit. Wash fruit thoroughly. Quarter; remove stems but not cores and skins. Add half as much water as fruit. Cook until fruit is soft, stirring constantly.

Press through a colander, then through a fine sieve to remove all fibrous material and give a smooth consistency.

● *TO PREPARE PLUM PULP.* Select sound, ripe fruit. Wash thoroughly. Crush and cook in the juice until soft, stirring constantly. Press through a colander, then through a fine sieve to remove all fibrous material to give a smooth consistency.

Proportion of ingredients for fruit butters.

4 cups fruit pulp
2 cups sugar
1/8 teaspoon salt
1/4 teaspoon mixed ground spices
(optional)

● *TO PREPARE BUTTER.* Combine pulp, sugar and salt. Boil rapidly and stir constantly to prevent burning. As the butter cooks down and thickens, reduce the heat to prevent spattering. Test for desired thickness by pouring a small quantity on a cold plate. Continue to cook until no rim of liquid separates around the edge of butter. Stir in fresh spices. If a light-colored butter is desired, add whole spices tied loosely in a cheese cloth bag while the butter is cooking. Pour boiling hot butter into hot, dry, sterilized jars to one-fourth inch of top if paraffin is to be used; otherwise, fill to top. Seal, label and store.



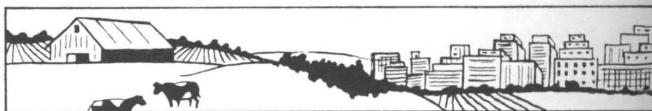
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