

# Sweet Spreads and Syrups

Jelly, jam, preserves, conserves, marmalades and fruit butters are similar products. All are made from fruit, preserved by sugar and thickened or gelled to some extent.

## Ingredients

To gel properly, sweet spreads must contain the right combination of fruit, pectin, acid and sugar. The fruit gives each spread its unique flavor and color. Fruit also supplies the water needed to dissolve the other ingredients and some or all of the pectin and acid. Good quality, flavorful fruits make the best sweet spreads.

If combined with the right amount of acid and sugar, pectins cause a gel to form. All fruits contain some pectin. Apples, crabapples, gooseberries and some plums and grapes contain enough natural pectin to form a gel. Other fruits, such as strawberries, cherries and blueberries, contain little natural pectin. They must be mixed with other fruits high in pectin or with commercial pectin products for a gel to form. Fully ripened fruit contains less pectin, so combine it with one-fourth underripe fruit when making sweet spreads without added pectin.

### Caution

Commercially frozen and canned juices are low in natural pectins and make soft-textured sweet spreads. Use only in recipes calling for added pectin.

The right amount of acid is crucial to gel formation. With too little acid, the gel will never set. Too much acid will cause the gel to lose liquid (weep). If fruits are low in acid, add lemon juice or other acid ingredients as directed. Commercial pectin products contain enough acid to ensure gelling.

Sugar helps preserve sweet spreads, contributes flavor, and aids in gelling. Granulated white sugar is most often used to make jelly or jam. You can replace part of the sugar with corn syrup or honey, but too much masks the fruit flavor and changes the gel structure. Use tested recipes

## Quality for Keeps



for replacing sugar with honey and corn syrup. Don't reduce the amount of sugar in traditional recipes, because a gel won't form, and yeasts and molds may grow in the sweet spreads.

Artificial sweeteners cannot be substituted for sugar in regular recipes because the sugar is needed for gel formation. Look for tested recipes on making jellied products without added sugar.

## Using the right lids

Even though sugar helps preserve sweet spreads, molds can still grow on the surface of these products unless they are heat-processed. It is not a safe practice to scrape the mold off the surface of sweet spreads and use what's left in the jar. Poisons called mycotoxins, which are known to cause cancer in animals, have been found in some jars of jelly with surface mold growth. The effects of mycotoxins on humans are still being researched, so you should discard any sweet spread containing mold.

Paraffin or wax seals don't prevent mold growth and are no longer recommended for sealing any sweet spread, including jelly.

To prevent mold growth and to keep good flavor and color, pour hot sweet spreads into sterilized jars; leave  $\frac{1}{4}$  inch of headspace. Seal with two-piece lids, and process as directed in Table 1. Be sure to use the processing time recommended for your altitude.

*Sweet spreads are best if eaten within one year.*

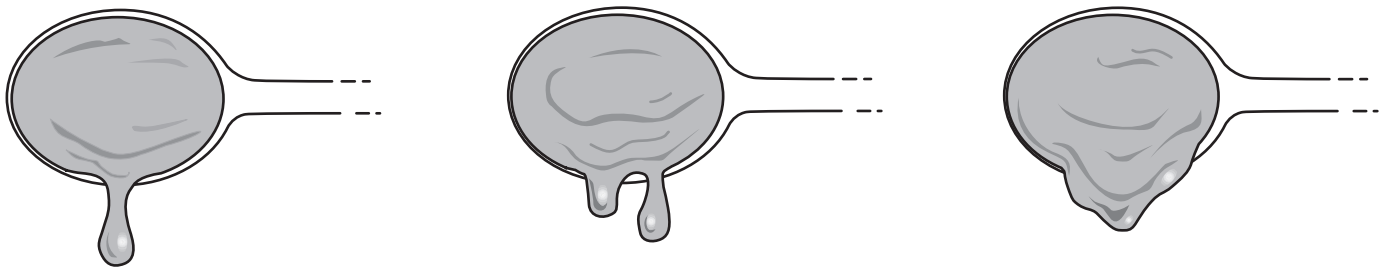
## Methods for making jams and jellies

You can make jams and jellies with or without added pectin. Only use the standard method of making sweet spreads — without added pectin — with fruits naturally high in pectin. It is much faster to make sweet spreads with added powdered or liquid pectin. For the best results, follow specific directions on packages of commercial pectins.

## Making jelly without added pectin

Use only firm fruits naturally high in pectin. Mix about three-fourths ripe and one-fourth underripe fruit. One pound of fruit will make at least 1 cup of clear juice.

Revised by  
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**Figure 1. The spoon or sheet test.** When the mixture first boils, drops are light and syrupy, as in the drawing on the left. As the mixture continues to boil, drops become heavier and drop off the spoon two at a time, as in the middle illustration. When two drops form together and “sheet” off the spoon, as in the drawing on the right, the gelling point has been reached.

Adding peels and cores while the fruit is cooking will add pectin to the juice and make your jelly firmer. Do not use commercially canned or frozen fruit juices, because their pectin content is too low.

Wash all fruits thoroughly before cooking. Cut firm, larger fruits into small pieces. Crush soft fruits or berries. Add water to fruits as directed in Table 2. Put fruit and water in a large saucepan and bring to a boil. Simmer, stirring occasionally, for the amount of time listed or until the fruit is soft.

Press soft fruit lightly through a colander. Then let juice drip through a double layer of cheesecloth or a jelly bag. Pressing or squeezing the cooked fruit will cause cloudy jelly.

Use no more than 6 to 8 cups of fruit juice at a time, and combine the right amounts of juice, sugar and lemon juice, as directed in Table 2. Heat to boiling. Stir until the sugar is dissolved. Boil over high heat, stirring frequently, until the gelling point is reached. Test for the gelling point with one of the following methods:

### Temperature test

Use a jelly or candy thermometer, and boil until mixture reaches the following temperature for your altitude.

If your altitude is	Boil until mixture reaches
Sea level	220 degrees F
1,000 feet	218 degrees F
2,000 feet	216 degrees F

### Sheet or spoon test

Dip a cool metal spoon into the boiling jelly mixture. Raise the spoon out of the steam, about 12 inches above the pan. Turn the spoon so the liquid runs off the side. The jelly is done when the syrup forms two drops that flow together and “sheet” or hang off the edge of the spoon (Figure 1).

When the gelling point is reached, remove jelly from the heat and quickly skim off foam. Pour the jelly through a wide-mouth funnel into sterilized jars. Leave ¼ inch of headspace. Adjust lids, and process as directed in Table 1.

## Making jam without added pectin

For best flavor, use fully ripe fruit. Wash and rinse all fruit thoroughly before cooking. Don’t soak. Remove stems,

skins and pits from fruit; cut fruit into pieces and crush. Remove stems and blossoms, and crush berries. Put seedy berries, such as raspberries and blackberries, through a sieve or food mill. Do not puree fruit, as doing so will change the acid level and cause a weak gel.

Use the ingredient amounts given in Table 3, and measure crushed fruit and sugar into a large saucepan. Bring to a boil while stirring rapidly and constantly. Continue to boil until the jam thickens. When testing for thickness, remember that jam continues to thicken as it cools. Test for thickness using one of the following methods:

### Temperature test

Use a jelly or candy thermometer and boil until jam reaches the right temperature for your altitude. (See chart in jelly directions.)

### Refrigerator test

Remove all the jam from the heat, and pour a small amount of boiling jam on a cold plate. Put the plate in the freezing compartment of a refrigerator for a few minutes. If the jam gels, it is thick enough.

When jam is done, remove it from the heat and quickly skim off foam. Pour the jam through a wide-mouth funnel into sterilized jars. Leave ¼ inch of headspace. Adjust lids, and process as directed in Table 1.

## Making jelly and jam with added pectin

You may use fresh fruits and juices or commercially canned or frozen juices (or a combination) with commercially prepared powdered or liquid pectins. Packaged pectins provide complete directions for a variety of fruits. Always follow package directions for combining ingredients.

Jelly or jam made with added pectin requires less cooking, usually gives a larger yield, and has more natural fruit flavor. Also, using added pectin eliminates the need to test for doneness.

You may add ½ teaspoon of butter or margarine to the juice and pectin to reduce foaming; however, this may cause off-flavors during long-term storage.

The following are usually available with packaged pectins:

- Jellies — apple, crabapple, blackberry, boysenberry, dewberry, currant, elderberry, grape, mayhaw, mint,

peach, plum, black or red raspberry, loganberry, rhubarb and strawberry.

- Jams — Apricot, blackberry, boysenberry, dewberry, loganberry, red raspberry, youngberry, blueberry, cherry, currant, fig, gooseberry, grape, orange marmalade, peach, pear, plum, rhubarb, strawberry and spiced tomato.

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*Buy pectin as needed every year. Old pectin may not gel.*

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### **Grape-plum jelly with pectin**

3½ pounds ripe plums  
3 pounds ripe Concord grapes  
1 cup water  
½ teaspoon butter or margarine (optional ingredient to reduce foaming)

8½ cups sugar  
1 box (1¾ ounces) powdered pectin

**Yield:** About 10 half-pints

**Procedure:** Wash and pit plums; do not peel.

Thoroughly crush plums and grapes, one layer at a time, in a large saucepan. Add water. Bring to a boil. Cover and simmer 10 minutes.

Strain juice through a jelly bag or double layer of cheesecloth. Measure sugar and set aside. Combine 6½ cups of juice with pectin in a large saucepan. Add butter if desired. Bring to a hard boil over high heat, stirring constantly. Add the sugar and return to a full, rolling boil. Boil hard for 1 minute, stirring constantly. Remove from heat, and quickly skim off foam and pour into sterilized half-pint jars. Leave ¼ inch of headspace. Adjust lids, and process the jars as directed in Table 1.

### **Blueberry-spice jam with pectin**

2½ pints ripe blueberries  
1 tablespoon lemon juice  
½ teaspoon ground nutmeg or cinnamon  
5½ cups sugar  
¾ cup water

1 box (1¾ ounces) powdered pectin

**Yield:** About 5 half-pints

**Procedure:** Wash and thoroughly crush blueberries, one layer at a time, in a large saucepan. Add lemon juice, spice and water. Stir in pectin, and bring to a full, rolling boil over high heat. Stir frequently. Add the sugar and return to a full, rolling boil. Boil hard for 1 minute, stirring constantly. Remove from heat, and quickly skim off foam and pour into sterilized half-pint jars. Leave ¼ inch of headspace. Adjust lids, and process the jars as directed in Table 1.

### **Pear-apple jam with pectin**

2 cups fully ripe pears, peeled, cored and finely chopped (about 2 pounds)  
1 cup apples, peeled, cored and finely chopped (about 1 large)

6½ cups sugar  
¼ teaspoon ground cinnamon  
½ cup bottled lemon juice  
6 ounces liquid pectin

**Yield:** About 7 to 8 half-pints

**Procedure:** Crush pears and apples in a large saucepan and stir in cinnamon. Thoroughly mix sugar and lemon juice into fruits, and bring to a boil over high heat, stirring constantly. Immediately stir in pectin. Bring to a full, rolling boil, and boil 1 minute. Stir constantly. Remove from heat, and quickly skim off foam and pour into sterilized half-pint jars. Leave ¼ inch of headspace. Adjust lids, and process the jars as directed in Table 1.

### **Strawberry-rhubarb jelly with pectin**

1½ pounds red stalks of rhubarb  
1½ quarts ripe strawberries  
½ teaspoon butter or margarine (optional ingredient to reduce foaming)

6 cups sugar  
6 ounces liquid pectin

**Yield:** About 7 half-pints

**Procedure:** Wash rhubarb, cut into 1-inch pieces, and blend or grind. Wash and stem strawberries, then crush berries one layer at a time. Put both fruits in a jelly bag or double layer of cheesecloth and gently squeeze out juice. Measure 3½ cups of juice into a large saucepan. Thoroughly mix sugar into juice, and add butter if desired. Bring to a boil over high heat, stirring constantly. Immediately stir in pectin. Bring to a full, rolling boil, and boil hard for 1 minute. Stir constantly. Remove from heat, and quickly skim off foam and pour into sterilized half-pint jars. Leave ¼ inch of headspace. Adjust lids, and process the jars as directed in Table 1.

### **Berry syrup**

Juices from fresh or frozen blueberries, cherries, grapes, raspberries (black or red) and strawberries are easily made into toppings for use on ice cream and pastries.

**Yield:** About 9 half-pints

**Procedure:** Select 6½ cups of fresh or frozen fruit of your choice. Wash, cap and stem fresh fruit, and crush in a saucepan. Heat to boiling and simmer until soft, about 5 to 10 minutes. Strain hot berries through a colander and let drain until cool enough to handle. Strain the collected juice through a double layer of cheesecloth or jelly bag. Discard the dry pulp. The yield of the pressed juice should be about 4½ to 5 cups.

Combine the juice with 6¾ cups of sugar in a large saucepan, bring to boil, and simmer 1 minute. To make a syrup with whole fruit pieces, save 1 or 2 cups of the whole fresh or frozen fruit, combine with the sugar and crushed fruit, and simmer as in making regular syrup. Remove from heat, skim off foam and pour into clean half-pint or pint jars. Leave ½ inch of headspace. Adjust lids, and process as directed in Table 1.

## Apple butter

8 pounds apples  
2 cups cider  
2 cups vinegar  
2¼ cups white sugar  
2¼ cups packed brown sugar  
2 tablespoons ground cinnamon  
1 tablespoon ground cloves

**Yield:** About 9 to 10 half-pints

**Note:** Use Jonathan, Winesap, Stayman, Golden Delicious, MacIntosh or other tasty apple varieties for good results.

**Procedure:** Wash, remove stems, quarter and core fruit. Cook slowly in cider and vinegar until soft. Press fruit through a colander, food mill or strainer. Cook fruit pulp with sugar and spices, stirring frequently. To test for doneness, remove a spoonful and hold it away from steam for 2 minutes. Apple butter is done if it remains mounded on the spoon. Or test for doneness by spooning a small amount onto a plate. When a rim of liquid does not separate around the edge of the apple butter, it is ready for processing. Fill hot, sterilized half-pint or pint jars. Leave ¼ inch of headspace. Adjust lids, and process as directed in Table 1.

## Canned spreads without added sugar

There are some methods for making jellied products without adding sugar or by adding less sugar than in a regular recipe that result in products that can be canned and stored at room temperature until opened. These methods do not involve simply leaving the sugar out of the recipes for regular pectins. Naturally occurring pectin in fruit and purchased regular pectins require a certain amount of sugar to gel.

Because these types of spreads do not have sugar as their preservative, be sure to process and store them as directed. Many recipes such as these also make smaller yields than regular jams and jellies. Without the sugar, they might lose quality more quickly than high-sugar spreads during storage and once opened.

There are two methods that can be used to create jellied products or fruit spreads without added sugar for room-temperature storage:

### Special modified pectins

Using special modified pectins is a quick, easy way to make lower-sugar jellied products that can be stored on the pantry shelf until opened. These special pectins are not the same as regular pectin. Look for packages that say “light,” “less sugar” or “no sugar added” on the label. Some products give the options of using no sugar with or without artificial sweeteners; others recommend less sugar than a regular pectin. A package insert will provide specific recipes and directions. Follow the directions carefully for whichever brand of pectin you use. Alterations to the recipe could result in product failures.

## Long-boil methods

Boiling fruit pulp for extended periods of time will make a product thicken and resemble a jam, preserve or fruit butter. Artificial sweeteners can be added as desired. These recipes often require a longer canning process time than a pectin-gelled spread.

### Peach-pineapple spread

4 cups drained peach pulp (procedure below)  
2 cups drained unsweetened crushed pineapple  
¼ cup bottled lemon juice  
2 cups sugar (optional)

**Yield:** About 5 to 6 half-pint jars

**Procedure:** Wash and rinse canning jars, and keep them hot until it's time to fill them. Thoroughly wash 4 to 6 pounds of firm, ripe peaches, and drain well. Peel and remove pits. Grind fruit flesh with a medium or coarse blade, or crush with a fork — do not use a blender. Place ground or crushed fruit in a 2-quart saucepan. Heat slowly to release juice, stirring constantly, until fruit is tender. Place cooked fruit in a jelly bag or strainer lined with four layers of cheesecloth. Allow juice to drip about 15 minutes. Save the juice for jelly or other uses.

Measure 4 cups of drained fruit pulp for making spread. Combine the 4 cups of pulp, pineapple and lemon juice in a 4-quart saucepan. Add up to 2 cups of sugar, if desired, and mix well. Heat and boil gently for 10 to 15 minutes, stirring enough to prevent sticking. Fill hot jars quickly, leaving ¼ inch of headspace. Wipe jar rims, and adjust lids. Process as directed, and see Table 1 for more information.

**Note:** This recipe can be made with any combination of peaches, nectarines, apricots and plums. This recipe can be made without sugar or with up to 2 cups, according to taste or preference. Artificial sweeteners can be added. If aspartame (a low-calorie nutritive sweetener) is used, its sweetening power might be lost within 3 to 4 weeks.

### Reduced sugar apple butter

4 pounds apples (see note)  
1 cup apple cider  
½ cup granulated sucralose (see note)  
1 tablespoon ground cinnamon  
¼ teaspoon ground cloves  
¼ teaspoon ground allspice

**Yield:** About 4 to 5 half-pint jars

**Note:** For testing purposes, Golden Delicious apples and Splenda were used.

**Procedure:** Wash apples well, and remove stems. Cut apples into quarters or eighths, and remove cores. Combine unpeeled apples and cider in an 8-quart saucepan. Cook slowly and stir occasionally to prevent sticking. Cook until apples are soft to the point of falling apart. Position a food mill or strainer securely over a large bowl. Press cooked apples with cider through the food mill or strainer to make a pulp. Collect all the pulp that comes through the food mill or strainer, and scrape any pulp clinging to the food mill into the bowl.

Combine apple pulp with sucralose and spices in an 8-quart saucepan. Simmer over low heat, stirring frequently until thickened. To test for doneness as a butter, spoon a small quantity onto a clean plate. When the butter mounds on the plate without liquid separating around the edge of the butter, it is ready for processing. Another way to test for doneness is to remove a spoonful of the cooked butter and hold it away from steam for 2 minutes. If the butter remains mounded on the spoon, it is done.

Fill hot apple butter into clean, hot jars, leaving  $\frac{1}{4}$  inch of headspace. Remove air bubbles, and adjust headspace, if needed. Wipe jar rims with a damp, clean paper towel, and adjust lids. Process as directed, and see Table 1 for more information.

## Refrigerator and freezer spreads

This section contains several options that are not canned for room temperature storage and must be stored in the refrigerator or freezer to prevent spoilage by molds or yeasts. Some use pectin and sugar, and others use gelatin and artificial sweeteners.

Some of these recipes should initially sit at room temperature until the gel forms. For those recipes specifying this step, do not store them in the freezer until after the gel is formed, which could take up to 24 hours. Placing them in the freezer too soon prevents the jam or jelly from setting. However, if they have not gelled within 24 hours, they must be refrigerated or frozen as is. Do not leave them out at room temperature for longer than 24 hours.

After the gel is formed, these spreads generally can be kept up to 3 weeks in a refrigerator or up to a year in a freezer. Freezer storage is best for maintaining natural color and flavor. If kept at room temperature, they will mold or ferment before long. Once a container is removed from the freezer, the product should be kept refrigerated and used within a week after being removed from the freezer. These products tend to separate more quickly than cooked and canned jellied products. If they separate but show no signs of spoilage, they can be stirred to mix the contents together.

### Methods

There are two common methods for making jellied refrigerator spreads without added sugar.

#### *Regular pectin with special recipes*

These special recipes have been formulated such that added sugar is unnecessary. However, each package of regular pectin contains some sugar. Artificial sweeteners are often added.

#### *Recipes using gelatin*

Some recipes use unflavored gelatin as the thickener for the jelly or jam. Artificial sweeteners are often added.

**Note:** The sweetener used in the following recipes is liquid saccharin. One-eighth teaspoon of liquid saccharin has the same sweetening power as 1 teaspoon of sugar. If

you use other sweeteners, read their labels to determine their sweetening power.

## Refrigerator and freezer spreads with sugar

### *Uncooked berry jelly*

3 cups unsweetened berry juice — fresh or frozen  
(strawberry, raspberry or blackberry)  
 $4\frac{1}{2}$  cups sugar  
1 box powdered pectin  
 $\frac{1}{2}$  cup water

**Yield:** About 6 half-pint jars

**Procedure:** Add the sugar to  $1\frac{1}{4}$  cups of berry juice and stir thoroughly. Slowly add the pectin to the water, and heat almost to boiling, stirring constantly. Pour the pectin mixture into the remaining  $1\frac{1}{4}$  cups of berry juice. Stir until pectin is completely dissolved, and then let the pectin mixture stand for 15 minutes. Stir occasionally and mix the juice mixture with the pectin mixture. Stir until all the sugar has dissolved.

Pour into freezer containers or canning jars, leaving  $\frac{1}{2}$  inch of headspace. Cover with a tight lid, and let stand at room temperature until set — up to 24 hours. Store in a refrigerator or freezer.

### *Uncooked grape jelly*

2 cups lukewarm water  
1 box powdered pectin  
1 (6-ounce) can of frozen grape juice concentrate  
 $3\frac{1}{4}$  cups sugar

**Yield:** About 5 half-pint jars

**Procedure:** Mix the pectin slowly into the lukewarm water in a 2-quart mixing bowl. Stir constantly until completely dissolved, and let stand for 45 minutes. Stir occasionally but do not beat the mixture.

Thaw juice by placing the frozen can in cold water. When the juice is thawed, pour it into a 1-quart mixing bowl and add  $1\frac{3}{4}$  cups of sugar. Mix thoroughly. The sugar will not all dissolve at this point. Add the remaining  $1\frac{1}{2}$  cups of sugar to the dissolved pectin, and stir until the sugar is dissolved. Mix the juice mixture with the pectin mixture, and stir until all sugar has dissolved.

Pour into freezer containers or canning jars, leaving  $\frac{1}{2}$  inch of headspace. Cover with a tight lid, and let stand at room temperature until set — up to 24 hours. Freeze or refrigerate.

### *Uncooked strawberry jam from fresh fruit*

$1\frac{3}{4}$  cups crushed strawberries  
4 cups sugar  
2 tablespoons lemon juice  
1 pouch liquid pectin

**Yield:** About 4 half-pint jars

**Procedure:** Place the crushed strawberries in a large bowl. Add sugar, mix well, and let stand for 10 minutes.

Measure lemon juice into a small bowl and add liquid pectin before stirring the mixture well. Stir into fruit and continue stirring for 3 minutes.

Pour jam into freezer containers or canning jars, leaving ½ inch of headspace. Cover the container, and let it stand at room temperature until set — up to 24 hours.

## Refrigerator and freezer spreads without added sugar

### *Peach jam with pectin*

4 cups peeled peaches  
3–4 teaspoons liquid artificial sweetener  
1 tablespoon lemon juice  
½ teaspoon ascorbic acid

1¾ ounces (1 package) powdered fruit pectin

**Yield:** About 3 half-pint jars (1 tablespoon = 10 calories)

**Procedure:** Crush peaches in a saucepan. Stir in sweetener, fruit pectin, lemon juice and ascorbic acid; bring the mixture to a boil. Boil for 1 minute, and then remove the saucepan from heat. Continue to stir for 2 minutes. Pour the mixture into freezer containers, cover, and freeze. Thaw for use; then keep refrigerated thereafter.

### *Strawberry jam with pectin*

1 quart cleaned strawberries  
3–4 teaspoons liquid artificial sweetener  
1 package powdered fruit pectin  
1 tablespoon lemon juice  
Red food coloring as desired

**Yield:** About 2 to 3 half-pint jars (1 tablespoon = 5 calories)

**Procedure:** Crush strawberries in a ½ quart saucepan. Stir in artificial sweetener, food coloring, powdered fruit pectin and lemon juice. Bring to a boil, and boil for 1 minute. Remove from heat and continue to stir for 2 minutes. Pour into freezer containers, cover, and freeze. Thaw for use, then keep refrigerated thereafter.

### *Apple jelly from bottled juice*

2 packages unflavored gelatin (2 tablespoons)  
1 quart unsweetened apple juice  
2 tablespoons lemon juice  
2 tablespoons liquid sweetener  
Food coloring, if desired

**Yield:** About 4 half-pint jars (1 tablespoon = 10 calories)

**Procedure:** Sterilize jars. In a saucepan, soften gelatin in apple juice and lemon juice. Bring to a rolling boil, dissolving gelatin, and boil for 1 minute. Remove from heat and stir in liquid sweetener. Pour into hot sterilized jars. Seal, cool, and store in the refrigerator.

### *Grape jelly with gelatin*

2 packages unflavored gelatin (2 tablespoons)  
2 tablespoons lemon juice  
1 bottle (24 ounces) unsweetened grape juice  
2 tablespoons liquid sweetener

**Yield:** About 3 half-pint jars (1 tablespoon = 10 calories)

**Procedure:** Sterilize jars. In a saucepan, soften gelatin in grape juice and lemon juice. Bring to a rolling boil, dissolving gelatin, and boil for 1 minute. Remove from heat and stir in liquid sweetener. Pour into hot sterilized jars. Seal, cool, and store in the refrigerator.

### *Refrigerator apple butter*

Cored and sliced ripe apples — enough to fill 6-quart pot  
½ cup water  
½ teaspoon salt  
5 drops cinnamon oil

Sweetener equal to 2 cups sugar

**Yield:** About 10 half-pint jars (1 tablespoon = 10 calories)

**Procedure:** Sterilize jars. Heat apples and water, covered, over medium heat for 6 to 8 hours, stirring frequently. Press apples through a sieve. Reheat, and add salt, cinnamon oil and sweetener. Cook to the desired thickness. Pour into hot sterilized jars. Seal, cool, and store in the refrigerator.

## Microwaved jellied products

Jellied products can be made in the microwave, but doing so doesn't always save time. When making microwave products, use a recipe developed for a microwave oven. Better still, use a recipe developed for your microwave. Because of power variations in microwaves, a recipe developed for one brand of microwave might not work for another, without experimenting first. Microwave jellied products boil over easily, so use a deep bowl for cooking the product.

## Jam and jelly gems

- Overcooking jam and jelly can break down pectin and prevent proper gelling.
- Always make only one batch at a time. Making more than one batch at a time (doubling or tripling the recipe) often results in soft gels.
- Stir constantly while cooking to prevent burning.
- Remember that recipes are developed for specific jar sizes. Using larger jars may cause excessively soft sweet spreads.

## Remaking soft jellies

Measure jelly to be recooked. Work with no more than 4 to 6 cups at a time.

### *To remake with powdered pectin*

For each quart of jelly, mix ¼ cup sugar, ½ cup water, 2 tablespoons bottled lemon juice and 4 teaspoons powdered pectin. Bring to a boil while stirring.

Add jelly and bring to a rolling boil over high heat, stirring constantly. Boil hard for ½ minute.

Remove from heat, and quickly skim off foam and pour into sterilized jars. Leave ¼ inch of headspace. Adjust new lids, and process the jars as directed in Table 1.

**Table 1. Recommended processing times for sweet spreads in a boiling-water canner.**

Product	Style of pack	Jar size	Minutes of process time at different altitudes	
			0–1,000 feet	1,001–6,000 feet
All jellies and jams with sugar, with or without added pectin	Hot	Half-pints or pints	5	10
Berry syrup	Hot	Half-pints or pints	10	15
Apple butter	Hot	Half-pints or pints	5	10
Spreads without added sugar	Hot	Half-pint	15	20
		Pint	20	25

When the jars have been processed in boiling water for the recommended time, turn off the heat and remove the canner lid. Wait five minutes. Remove jars from canner; use a jar lifter and keep jars upright. Carefully place them directly onto a towel or cake cooling rack, leaving at least 1 inch of space between the jars during cooling. Avoid placing the jars on a cold surface or in a cold draft. Cool jars upright for 12 to 24 hours while vacuum seal is drawn and jam or jelly sets up.

**Table 2. Making jelly without added pectin.**

Fruit	To make juice		To make jelly		
	Cups of water to be added per pound of fruit	Minutes to simmer before separating out juice	Cups of sugar to add to each cup of strained juice	Lemon juice (optional)	Half-pints of jelly created by 4 cups of juice
Apples, tart	1	20–25	¾	1½ teaspoons	4–5
Berries	0–¼	5–10	¾–1	None	7–8
Crabapples	1	20–25	1	None	4–5
Grapes, eastern concord	0–¼	5–10	¾–1	None	8–9
Plums, not Italian	½	15–20	¾	None	8–9

**Table 3. Making jam without added pectin.**

Fruit	Cups of crushed fruit	Cups of sugar to add to crushed fruit	Tablespoons of lemon juice	Half-pints created
Apricots	4–4½	4	2	5–6
Berries <sup>a</sup>	4	4	0	3–4
Peaches	5½–6	4–5	2	6–7

<sup>a</sup> Includes blackberries, boysenberries, dewberries, gooseberries, loganberries, raspberries and strawberries.

### To remake with liquid pectin

For each quart of jelly, measure ¾ cup sugar, 2 tablespoons bottled lemon juice and 2 tablespoons liquid pectin. Bring jelly only to boil over high heat, while stirring. Remove from heat, and quickly add the sugar, lemon juice and pectin. Bring to full rolling boil, stirring constantly. Boil hard for 1 minute,.

Remove from heat, and quickly skim off foam and pour into sterilized jars. Leave ¼ inch of headspace. Adjust new lids, and process the jars as directed in Table 1.

### To remake without added pectin

For each quart of jelly, add 2 tablespoons bottled lemon juice. Heat to boiling, and boil for 3 to 4 minutes. Use one of the tests described above to determine if jelly is done.

Remove from heat, and quickly skim off foam and pour into sterilized jars. Leave ¼ inch of headspace. Adjust new lids, and process the jars as directed in Table 1.

## References

White, Athalie, Ann Ford, Elizabeth L. Andress, and Judy A. Harrison. 2014. *So Easy To Preserve*, 6th ed. University of Georgia Cooperative Extension Service.

#### ALSO FROM MU EXTENSION PUBLICATIONS

GH1451 *Quality for Keeps: Before You Start to Can, Learn the Basics*

GH1452 *Quality for Keeps: Steps to Success in Home Canning*

GH1455 *Quality for Keeps: Fruitful Canning*

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