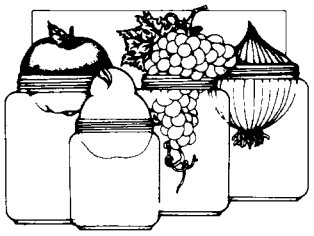
How to Can Sweet Spreads

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.

Please refer to MU Extension publications GH1451, *Crucial Home Canning Basics* *(extension.missouri.edu/publications/gh1451)*, and GH1452, *Step by Step Successful Home Canning* *(extension.missouri.edu/publications/gh1452)*, for information on correct canning procedures.

Sweet spreads are best if eaten within one year.

Quality for Keeps



Key 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.

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.

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.

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 research-based tested recipes when replacing sugar with honey or corn syrup. Don't reduce the amount of sugar in 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 sugar is needed for gel formation. Look for research-based tested recipes on making jellied products without added sugar.

If combined with the right amount of acid and sugar, **pectins** cause a gel to form. All fruits contain some pectin. Fruits that are low in pectin must must be mixed with other fruits high in pectin or with a commercial pectin product for a gel to form. Fully ripened fruit also contains less pectin so it must be combined with underripe fruit then making with one-fourth underripe fruit when making sweet spreads without added pectin.

Chart 1.

High in pectin	Low in pectin
Apples	Apricots
Crabapples	Berries
Gooseberries	Cherries
Most varieties of plums	Peaches
Most varieties of grapes	Pears

Seal jars safely

Even though sugar helps preserve sweet spreads, molds can still grow on the surface of these products unless they are heat-processed for shelf storage.

Developed by **Susan Mills-Gray and Barbara Willenberg**
Revised by **Susan Mills-Gray**, Extension Professor Emerita, College of Health Sciences

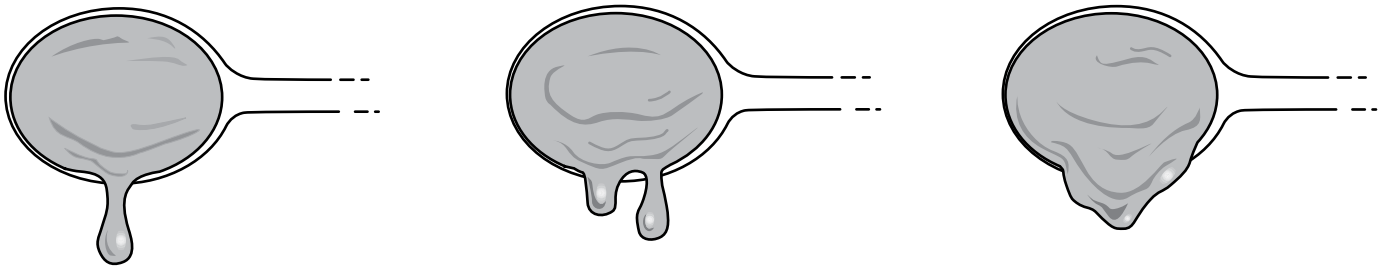


Figure 1. The spoon or sheet test. When the mixture first boils, drops are light and syrupy, as in the drawing on the left. As the mixture continues to boil, drops become heavier and drop off the spoon two at a time, as in the middle illustration. When two drops form together and "sheet" off the spoon,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

To prevent mold growth and to keep good flavor and color, pour hot sweet spreads into sterilized jars; leave ¼ 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 elevation. **Paraffin or wax seals don't prevent mold growth and are not recommended for sealing any sweet spread.**

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.

Methods for making sweet spreads

You can make sweet spreads with or without added commercial pectin. Use only the traditional method of making sweet spreads — without added commercial pectin — with fruits naturally high in pectin. However, it is much faster to make sweet spreads with added commercial powdered or liquid pectin. For the best results, follow specific directions on packages of commercial pectins.

Making JELLY with the long boil method with no added pectin

These types of sweet spreads have a richer flavor than commercial pectin-added sweet spreads. The most difficult part of this method is knowing when the spread has reached the gelling point.

Use only firm fruits naturally high in pectin. Mix about ¾ ripe and ¼ underripe fruit. One pound of fruit will make at least 1 cup of clear juice. 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 in Table 2 or until the fruit is soft.

Press soft fruit lightly through a colander. Then let the juice drip through a double layer of cheesecloth or a jelly bag; DO NOT press or squeeze the cooked fruit as this will cause cloudy jelly.

Use no more than 6 to 8 cups of fruit juice at a time. Combine the recommended amounts of juice, sugar and lemon juice as directed in Table 2, in a large, deep saucepan. 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 elevation.

Chart 2.

If your elevation 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 a "sheet" or hangs 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 with the long boil method with no 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. 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.Bring to a boil in a large and deep saucepan 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 gelling point using one of the following methods:

Temperature test

Use a jelly or candy thermometer and boil until jam reaches the right temperature for your elevation (See Chart 2).

Refrigerator test

Remove the saucepan from the heat, and pour a very 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.

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 or JAM with the short-boil method with pectin added

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

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.

Powdered and liquid commercial pectins are NOT interchangeable.

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.

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

Blackberry jam

- 6 cups crushed blackberries (about 3 quart boxes berries)
- 1 package powdered pectin
- 8½ cups sugar

Yield: About 11 or 12 half-pint jars

Procedure: Sort and wash fully ripe berries; remove any stems or caps. Crush berries. If they are very seedy, put part or all of them through a sieve or food mill. Measure crushed berries into a kettle. Add pectin and stir well. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Add sugar, continue stirring, and heat again to a full bubbling boil. Boil hard for 1 minute, stirring constantly. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Blackberry jelly

- 3½ cups blackberry juice (about 3 quart boxes berries)
- 1 package powdered pectin
- 4½ cups sugar

Yield: About 5 or 6 half-pint jars

Procedure: Sort and wash fully ripe berries; remove any stems or caps. Crush berries and extract juice. Measure juice into a kettle. Add pectin and stir well. Place on high heat and, stirring constantly, bring quickly to a full rolling boil that cannot be stirred down. Add sugar, continue stirring, and heat again to a full rolling boil. Boil hard for 1 minute. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Blueberry-spice jam

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

Cherry jam

- 4 cups ground or finely chopped pitted cherries (about 3 pounds or 2 quart boxes sour cherries)
- 1 package powdered pectin
- 5 cups sugar

Yield: About 6 half-pint jars

Procedure: Sort and wash fully ripe cherries; remove any stems and pits. Grind cherries or chop fine. Measure prepared cherries into a kettle. Add pectin and stir well. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Add sugar, continue stirring and heat again to full bubbling boil. Boil hard for 1 minute, stirring constantly. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Grape-plum jelly

- 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.

Grape jelly

- 5 cups grape juice (about 3½ pounds Concord grapes and 1 cup water)
- 1 package powdered pectin
- 7 cups sugar

Yield: About 8 or 9 half-pint jars

Procedure: Sort, wash, and remove stems from fully ripe grapes. Crush grapes, add water, cover, bring to boil on high heat. Reduce heat and simmer for 10 minutes. Extract juice. To prevent formation of tartrate crystals in the jelly, let juice stand in a cool place overnight, then strain through two thicknesses of damp cheesecloth to remove crystals that have formed. Measure juice into a kettle. Add pectin and stir well. Place on high heat and, stirring constantly, bring quickly to a full rolling boil that cannot be stirred down. Add sugar, continue stirring, and heat again to a full rolling boil. Boil hard for 1 minute. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Peach jam

- 3¾ cups crushed peaches (about 3 pounds peaches)
- ¼ cup lemon juice
- 1 package powdered pectin
- 5 cups sugar

Yield: About 6 half-pint jars

Procedure: Sort and wash fully ripe peaches. Remove stems, skins, and pits. Crush peaches. Measure crushed peaches into a kettle. Add lemon juice and pectin; stir well. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Add sugar, continue stirring, and heat again to full bubbling boil. Boil hard for 1 minute, stirring constantly. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Pear-apple jam

- 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 ⅓ 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 1/4 inch of headspace. Adjust lids, and process the jars as directed in Table 1.

Golden pepper jelly

- 5 cups chopped yellow bell peppers (about 4 large fleshy peppers as purchased)
- ½ cup chopped Serrano chile peppers (about 5 peppers as purchased)
- 1½ cups white distilled vinegar (5%)
- 5 cups sugar
- 1 pouch (3 ounces) liquid pectin

Yield: About 5 half-pint jars

Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes.

Procedure: Wash all peppers thoroughly; remove stems and seeds from the peppers. Do not remove the membrane from the hot peppers, since the remaining capsaicin for pepper heat is located there. Place sweet and hot peppers in a blender or food processor. Add enough vinegar to purée the peppers, then purée. Combine the pepper-vinegar purée and remaining vinegar into an 8- or 10-quart saucepan. Heat to a boil; then boil 10 minutes to extract flavors and color. Remove from heat and strain through a jelly bag into a bowl. (The jelly bag is preferred; several layers of cheesecloth may also be used.)6. Measure 2-1/4 cups of the strained pepper-vinegar juice into the 8- to 10-quart saucepan. Stir in sugar until dissolved and return mixture to a boil. Add the pectin, return to a full rolling boil and boil hard for 1 minute, stirring constantly. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Plum jam

- 6 cups crushed plums (about 3½ pounds plums)
- 1 package powdered pectin
- 8 cups sugar

Yield: About 9 half-pint jars

Procedure: Sort fully ripe plums, wash, cut into pieces, and remove pits. If flesh clings tightly to pits, cook plums slowly in a small amount of water for a few minutes until they are softened, then remove pits. Crush fruit. Measure crushed plums into a kettle. Add pectin and stir well. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Add sugar, continue stirring, and heat again to a full bubbling boil. Boil hard for 1 minute. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Strawberry jam

- 5½ cups crushed strawberries (about 3 quart boxes strawberries)
- 1 package powdered pectin
- 8 cups sugar

Yield: About 9 or 10 half-pint jars

Procedure: Sort and wash fully ripe strawberries; remove stems and caps. Crush berries. Measure crushed strawberries into a kettle. Add pectin and stir well. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Add sugar, continue stirring, and heat again to a full bubbling boil. Boil hard for 1 minute, stirring constantly. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

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

Product	Style of pack	Jar size	Process time at different elevations (in minutes)	
			0–1,000 feet	1,001–6,000 feet
All jellies and jams with sugar, with or without added pectin	Hot	Half pint or pint	5	10
Berry syrup	Hot	Half pint or pint	10	15
Apple butter	Hot	Half pint or pint	5	10
Spreads without added sugar	Hot	Half pint	15	20
		Pint	20	25

When the jars have been processed 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 commercial 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

Table 3. Making jam without added commercial pectin

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

[a] Includes blackberries, boysenberries, dewberries, gooseberries, loganberries, raspberries and strawberries.

Strawberry jelly

- 3½ cups strawberry juice (about 3 quart boxes berries)
- 1 package powdered pectin
- 4½ cups sugar

Yield: About 5 or 6 half-pint jars

Procedure: Sort and wash fully ripe berries; remove any stems or caps. Crush berries and extract (nchfp.uga.edu/how/make-jam-jelly/jams-jellies-general-information/extracting-juice-for-jelly) juice. Measure juice into a kettle. Add pectin and stir well. Place on high heat and, stirring constantly, bring quickly to a full rolling boil that cannot be stirred down. Add sugar, continue stirring, and heat again to a full rolling boil. Boil hard for 1 minute. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Strawberry-rhubarb jelly

- 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.

Tomato jam (spiced)

- 3 cups prepared tomatoes (prepare about 2¼ pounds tomatoes)
- 1½ teaspoons grated lemon rind
- ½ teaspoon ground allspice
- ½ teaspoon ground cinnamon
- ¼ teaspoon ground cloves
- ¼ cup lemon juice
- 4½ cups sugar
- 1 box powdered pectin

Yield: About 5 half-pint jars

Procedure: Measure sugar and set aside. Wash firm ripe tomatoes. Scald, peel, and chop tomatoes. Place chopped tomatoes in saucepan and heat slowly to simmering, stirring constantly to prevent sticking and burning. Cover and simmer 10 minutes, stirring occasionally. Measure 3 cups of the cooked tomatoes into a large saucepan. Add lemon rind, allspice, cinnamon, cloves and lemon juice to the prepared tomatoes in the saucepan. Stir powdered pectin into prepared tomatoes. Bring to a boil over high heat, stirring constantly. At once, stir in all sugar. Stir and bring to a full rolling boil that cannot be stirred down. Then boil hard for 1 minute, stirring constantly. Remove from heat and skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Tutti-frutti jam

- 3 cups chopped or ground pears (about 2 pounds pears)
- 1 large orange
- ¾ cup drained crushed pineapple
- ¼ cups chopped maraschino cherries (3-ounce bottle)
- ¼ cup lemon juice
- 1 package powdered pectin
- 5 cups sugar

Yield: About 6 or 7 half-pint jars

Procedure: Sort and wash ripe pears; pare and core. Chop or grind pears. Peel orange, remove seeds and chop or grind pulp. Measure chopped pears into a kettle. Add orange, pineapple, cherries, and lemon juice. Stir in pectin. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Add sugar, continue stirring, and heat again to full bubbling boil. Boil hard for 1 minute, stirring constantly. Remove from heat; skim. Fill hot jam immediately into hot, sterile jars, leaving ¼ inch headspace, adjust lids and process as directed in Table 1.

Tips for making sweet spreads without added sugar

There are specific methods for making sweet spreads 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. It's not simply leaving the sugar out of the recipes. Naturally occurring pectin in fruit and commercial 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. These low and no-sugar spreads produce smaller yields than sugar based sweet spreads. Without the sugar, these spreads lose quality more quickly than high-sugar spreads during storage and once opened.

There are two specific methods that can be used to create sweet spreads without added sugar:

1. Using specially modified pectins

Using modified commercial pectins is a quick, easy way to make lower-sugar jellied products for shelf storage. 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.

2. Using the long-boil method

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, but keep in mind that certain sweeteners break down during long periods of heat treatment and this can cause a bitter aftertaste. These recipes often require a longer canning process time than a pectin-gelled spread.

Reduced-sugar 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 pints

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 frequently 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 an aspartame sweetener is used, its sweetening power might be lost diminished during storage.

Reduced sugar apple butter

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

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

Yield: About 4 to 5 half pints

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 ¼ 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.

Making refrigerator and freezer sweet spreads

These spreads 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 the products 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, and can be used as syrup or ice cream topping. 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 three 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. These products tend to separate more quickly than cooked and canned sweet spreads. If they separate but show no signs of spoilage, they can be stirred to mix the contents together.

Berry jelly

- 3 cups unsweetened berry juice — fresh or frozen (strawberry, raspberry or blackberry)
- 4½ cups sugar
- 1 box powdered pectin
- ½ cup water

Yield: About 6 half pints

Procedure: Add the sugar to 1¼ 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 1¾ 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 ½ 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.

Grape jelly

- 2 cups lukewarm water
- 1 box powdered pectin
- 1 can (6 ounces) frozen grape juice concentrate
- 3¼ cups sugar

Yield: About 5 half pints

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 1¾ cups of sugar. Mix thoroughly.

The sugar will not all dissolve at this point. Add the remaining 1½ 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 ½ inch of headspace. Cover with a tight lid, and let stand at room temperature until set — up to 24 hours. Freeze or refrigerate.

Strawberry jam

- 1¾ 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.

There are TWO specific methods for making refrigerator sweet spreads without added sugar

1. Using regular pectin with specially formulated recipes

These special recipes have been formulated so that added sugar is unnecessary. However, each package of regular pectin does contain a small amount of sugar. Also, artificial sweeteners are often added.

2. Using 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.

Peach jam

- 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 pints (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, and keep refrigerated thereafter.

Strawberry jam

- 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 pints (1 tablespoon = 5 calories)

Procedure: Crush strawberries in a 1½-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 tablespoons of unflavored gelatin
- 1 quart unsweetened apple juice
- 2 tablespoons lemon juice
- 3 tablespoons liquid sweetener
- Food coloring, if desired

Yield: About 4 half pints (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

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

Yield: About 3 half pints (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.

Apple butter

- Cored and sliced ripe apples — enough to fill a 6-quart pot
- ½ cup water
- ½ teaspoon salt
- 5 drops cinnamon oil
- Sweetener equal to 2 cups sugar

Yield: About 10 half pints (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.

Making microwaved sweet spreads

Sweet spreads 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. Microwaved sweet spreads boil over easily, so use a deep bowl for cooking the product.

Important sweet spread tips

- 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.

Family favorites

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

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

Yield: About 9 to 10 half pints

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.

How to remake sweet spreads that don't gel

Measure jelly to be recooked. Work with no more than 4 to 6 cups at a time. Use one of the following methods:

1. 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.

2. 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.

3. 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

Andress, E.L., and J. A. Harrison. 2014. *So easy to preserve*, 6th ed. Bulletin 989. Athens, GA: University of Georgia Cooperative Extension Service. https://www.fcs.uga.edu/extension/so-easy-to-preserve

ALSO FROM MU EXTENSION PUBLICATIONS

GH1451 *Crucial Home Canning Basics*
GH1452 *Step by Step Successful Home Canning*
GH1454 *How to Can Fresh Vegetables*
GH1455 *How to Can Fresh Fruit*
GH1456 *How to Can Fresh Tomato Products*
GH1457 *How to Can Pickled Products*
GH1490 *How to Can Meat, Fish and Poultry*
GH1501 *Freezing Basics*
GH1502 *How to Freeze Fruits*
GH1503 *How to Freeze Vegetablaes*
GH1504 *Freezing Meat, Poultry, Fish, eggs and Dairy Products*
GH1505 *How to Freeze Home-Prepared Foods*
GH1562 *Introduction to Food Dehydration*
GH1563 *How to Dehydrate Foods*
GH1564 *How to Use Dehydrated Foods*

extension.missouri.edu | 800-292-0969

Information in this publication is provided purely for educational purposes. No responsibility is assumed for any problems associated with the use of products or services mentioned. No endorsement of products or companies is intended, nor is criticism of unnamed products or companies implied.

MU Extension
University of Missouri

Issued in furtherance of the Cooperative Extension Work Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Director, Cooperative Extension, University of Missouri, Columbia, MO 65211 • MU Extension provides equal opportunity to all participants in extension programs and activities and for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of race, color, national origin, ancestry, religion, sex, sexual orientation, gender identity, gender expression, age, genetic information, disability or protected veteran status. • 573-882-7216 • extension.missouri.edu