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# Preserving Uncooked Jams and Jellies

## Introduction

Today's busy consumer has the option to preserve fresh fruits by using recipes for uncooked jams and jellies. Uncooked jams and jellies are different from regular jams in that they require no cooking of the fruit. Since no processing is required, these jams have to be stored in the refrigerator or the freezer instead of on a shelf. They can be made from most fresh or frozen fruits or fruit juices. The secret of making successful no-cook jam is the fruit pectin. Pectin helps jam to set to the right consistency. Pectin will gel with certain proportions of fruit, acid, and sugar even if the ingredients are combined when cold. Various brands of pectin, in both powdered and liquid forms, are on the market.

Uncooked jams and jellies must be stored in the refrigerator or freezer. Store them in the freezer only after the gel has formed, which may take up to 24 hours. Placing them in the freezer too soon will inhibit the jam or jelly from "setting." Uncooked jams and jellies can be kept up to 4 weeks in a refrigerator or up to one year in a freezer. Freezer storage is best for maintaining natural color and flavor. If kept at room temperature, uncooked jams and jellies will mold or ferment in a short time.

Uncooked jams and jellies are appealing for the following reasons:

- They are bright in color, characteristic of the fruit(s) from which they are made.
- The amount of ingredients called for is usually less than in the cooked jams and jellies.

- They have a stronger fruit taste than cooked jams and jellies, unclouded by the caramelization flavors that come when cooking a high sugar item over direct heat.
- They require less equipment in the kitchen than cooked jams and jellies, less time to prepare, and less use of heat.

## Jellied Products

Jams, jellies, preserves, conserves, marmalades, and conserves are fruit products that are jelled and thickened. Each fruit product has its own individual characteristics, the kind of fruit used and the way it is prepared, the ingredients and their proportions in the mixture, and the method of preparation.

**Uncooked jams** are thick, sweet spreads made by mixing crushed or chopped fruits with pectin and sugar. Although jams hold their shape, they are generally less firm than jellies.

**Uncooked jellies** are usually made by mixing fruit juice with sugar and pectin. A good product is clear and firm enough to hold its shape when taken out of the container.

**Uncooked preserves** are spreads containing small, whole fruit or uniformly sized pieces of fruit in a clear, slightly gelled syrup, which is created by mixing the fruit sugar and pectin. The fruit should be tender and plump.

**Uncooked conserves** are jam-like products made from a mixture of fruits. Conserves may also contain nuts, raisins, or coconut.

**Uncooked marmalades** are soft fruit jellies containing small pieces of fruit or peel. Marmalades often contain citrus fruit.

**Fruit butters** are sweet spreads made by cooking fruit pulp with sugar to a thick consistency. Spices are often added. *Because butters are not gelled, there is no uncooked equivalent of this product.*

### Essential Ingredients

For successful jellied products, a proper ratio of fruit, pectin, acid, and sugar is needed. Follow directions exactly.

#### Fruit

For best color, flavor, and consistency, choose ripe fruit (shape is irrelevant). You can also use unsweetened, canned or frozen fruit, or fruit juice to make jellied products. If you preserve your own fruit or fruit juice, use some slightly underripe fruit (usually 1/4 slightly underripe and 3/4 fully ripe is recommended). Fruit to be used later for jam is best canned in its own juice. If adding sugar, note on each jar how much sugar it contains. This will be needed to adjust recipes later.

#### Pectin

Pectin is the natural substance in fruit that causes the fruit juice to gel. Some kinds of fruit have enough natural pectin to make a firm gel; others require added pectin. The best type of pectin is found in just-ripe fruit. Pectin from underripe or overripe fruit will not form a gel. Fruits containing enough natural pectin to form a gel include crab apples, tart apples, sour blackberries, sour boysenberries, most plums, cranberries, lemons, and wild grapes (Eastern Concord variety). Fruits low in pectin include sweet cherries, quince, ripe blackberries, sour cherries, grapefruit, grape juice, grapes, melons, and oranges. With these latter fruits, you will usually need to add pectin. Fruits always requiring added pectin are peaches, pears, figs, apricots, elderberries, strawberries, raspberries, grapes (Western Concord variety), guava, and pomegranates.

Commercial pectins are made from apples or citrus fruit and are available in both powdered and liquid forms. Be sure to follow the manufacturer's directions when using commercial pectin. *The powdered and liquid forms are not interchangeable in recipes.*

*Commercial pectins may be used with any fruit. Unlike cooked jams and jellies, freezer jams and jellies can only be made using commercial pectin.*

#### Acid

Acid aids in gel formation and enhances flavor. The acid content varies among fruits and is higher in underripe fruits. When fruits are low in acid, add lemon juice or citric acid. Added acid is always required with some types of commercial pectins. Sometimes the acid is already combined with the commercial pectin. Check the ingredients list.

#### Sugar and Artificial Sweeteners

Sugar must be present in the proper proportions with pectin and acid to make a good gel. Sugar also prevents the growth of microorganisms in the product and contributes to the taste. *Never change the amount of sugar in a recipe.*

Granulated white sugar (pure cane or beet) is usually used in homemade jellied fruit products. Sweeteners such as brown sugar, sorghum, and molasses are not recommended because their flavors overpower the fruit and their sweetness varies.

You can replace part *but not all* of the sugar with light corn syrup or light, mild honey. For best results, use tested recipes that specify honey or corn syrup.

*Artificial sweeteners cannot be substituted for sugar in regular recipes because gel formation specifically requires sugar.* Jellied fruit products without added sugar must be made using special recipes or special gelling products. Approved recipes using artificial sweeteners are included in this fact sheet. Follow recipes exactly as they have been tested.

Granular Splenda® (sucralose) does not provide preservative properties like sugar. The University of Georgia has developed recipes for uncooked jams and jellies using Splenda®. They can be found online at <http://www.uwex.edu/ces/cty/marathon/flp/documents/SplendaUseinHomemadeJamsandJellies.pdf>. Splenda® is heat stable, but some people do notice an aftertaste in other products, so it's possible it might change in flavor a little over storage time. There are some uncooked jam and jelly recipes at the Splenda® manufacturer's web site, although there is a qualification that the site is intended for Canadian users only: [http://www.splenda.ca/en/recipes/ListRecipe.asp?category\\_id=47](http://www.splenda.ca/en/recipes/ListRecipe.asp?category_id=47).

## Equipment and Containers

Basic equipment for making freezer jams and jellies include a bowl large enough to hold the fruit and sugar combination (2–3 quarts), a small pan to heat powdered pectin and water, measuring cups, and small and large mixing spoons.

If you will be extracting juice for jelly, you will also need a jelly bag or suitable cloth. Firm unbleached muslin or cotton flannel with the napped side turned in or four thicknesses of closely woven cheesecloth may be used. Jelly bags or cloths should be damp. Make sure the cheesecloth is not treated and is suitable for contact with food.

Store your uncooked jams and jellies in glass canning jars specifically designed for the freezer or food-grade plastic containers, with headroom to allow for expansion. All containers should be moisture-resistant and vapor-resistant.

## Making Uncooked Jams and Jellies

### Amount to Prepare

For best results, follow the directions that come with the commercial pectin. Do not alter the recipe measurements.

### Preparing the Containers

Wash your moisture- and vapor-resistant containers in warm water and detergent, then air dry them. Sterilizing containers is not necessary. To maximize the strength of the gel, do not use jars larger than pint size.

### Storage

Uncooked jams and jellies must be stored in the refrigerator or freezer. Do not store them in the freezer until the jel has set. This could take up to 24 hours. Placing them in the freezer too soon will prevent the jam or jelly from “setting.”

Uncooked jams and jellies can be kept for up to **three weeks** in the refrigerator or up to a year in the freezer. They are subject to more syneresis (“weeping” or separation of liquid from the gel). Freezer storage is best for maintaining natural color as well as flavor. Room temperature is not recommended because uncooked jellied products will mold or ferment in a short time. Once the container is opened, the product should be used within a few days.

## Jellied Products without Added Sugar

Jellied products without sugar or with reduced sugar cannot be made by leaving the sugar out of the regular freezer jam or jelly recipe. However, they can be made by the following methods:

1. **Special modified pectins**—These pectins are not the same as regular pectin. They will say “light” or “less sugar” on the label. Follow the directions on the package. Some products are made with less sugar and some with artificial sweeteners.
2. **Regular pectin with special recipes**—These special recipes have been formulated so that no added sugar is needed. However, each package of regular pectin does contain some sugar. Artificial sweetener is often added to these special recipes.
3. **Recipes using gelatin**—Some recipes use unflavored gelatin as the thickener for the jam or jelly. Artificial sweetener is often added. ***These products do not freeze well. Treat them as refrigerator jams or jellies.***

Follow the directions on the modified pectin box or in a no-sugar recipe exactly. Alterations in the recipe could result in product failure. Because these products do not have enough sugar to act as a preservative, they must be stored in the refrigerator during gel formation instead of on the counter. Freeze after 12–24 hours.

## Directions for Using Juices for Uncooked Jellies

Juice for uncooked jelly is made from *unheated* fresh fruit. However, it can be made with frozen juice *not heat-extracted* or *sweetened*; or with juice from berries that have been frozen, *without added sugar*, for making jelly later. It cannot be made successfully from canned fruit juice, because the natural pectin has been impaired by the heat of processing. Consumers seem to make more freezer jams and jellies perhaps because there is more leeway to a jam’s consistency than there is for jelly. The grade-fresh flavor of berries is more pronounced in jams. Like their jam counterparts, opened freezer jelly must be refrigerated.

## Remaking Uncooked Jams and Jellies

### With Liquid Pectin

First, remake a trial batch using 1 cup of jam or jelly. Do not remake more than 8 cups at once. In a bowl, combine measured jam or jelly and 3 Tablespoons

sugar and 1½ teaspoons lemon juice for each cup of jam or jelly. Stir well until sugar is dissolved (about 3 minutes). Add 1½ teaspoons liquid pectin per cup of jam or jelly and stir until well blended (about 3 minutes). Pour into clean containers. Cover with tight lids. Let stand in refrigerator until set, then store in refrigerator or freezer.

### ***With Powdered Pectin***

First, remake a trial batch using 1 cup of jam or jelly. Do not remake more than 8 cups at once. In a bowl, combine measured jam or jelly and 2 Tablespoons sugar for each cup of jam or jelly. Stir well until dissolved (about 3 minutes). Measure 1 Tablespoon water and 1½ teaspoons powdered pectin for each cup of jam or jelly. Place in small saucepan and place over low heat, stirring until the powdered pectin is dissolved. Add to the sugar and fruit mixture and stir until thoroughly blended (about 2–3 minutes). Pour into clean containers. Cover with tight lids. Let stand in refrigerator until set, then store in refrigerator or freezer.

## **FAQs (Frequently Asked Questions)**

### ***Why did my jam ferment? I followed the recipe exactly!***

Fermentation is caused by yeasts growing and multiplying in a warm, moist, food-rich environment. Live yeasts and molds live on the surface of unheated fruits. When sugar is added and the fruit sits at a very warm room temperature, all the requirements for yeast growth are fulfilled. Store the uncooked jam in the refrigerator so the yeasts are not at an optimal growing temperature.

### ***Why do I have white spots in my uncooked jam?***

Soft or fuzzy white spots indicate mold growth. If this is the case, throw the jam out. Mold growth can occur if the jam is kept out of the freezer for an extended period or if the freezer is not kept at 0 degrees F.

Hard white spots indicate crystallization of the sugar pectin or, possibly, a chemical reaction among the compounds in the fruit, minerals in any added water, and materials in the mixing container. Small sugar crystals are hard to avoid in an uncooked jam. In any case, the crystals, though not aesthetically pleasing, are not harmful.

**Causes of sugar crystals** include too much sugar added to the fruit, sugar not thoroughly stirred into the fruit (until it was all dissolved), undissolved sugar sticking to the sides of the mixing bowl, and fruit colder than room temperature so sugar doesn't dissolve completely.

**To prevent sugar crystals**, measure sugar carefully and stir it into fruit at or slightly warmer than room temperature. Stir for the recommended amount of time and carefully scrape the sides of the bowl to catch all stray sugar granules. Warming jam with sugar crystals may help redissolve the sugar. If you have a microwave, use it to heat the mixture. This will help maintain the bright color and fresh taste of a freezer jam.

**The cause of pectin crystals** may be the use of too much underripe fruit. Underripe fruit has more pectin than ripe fruit. The combination of commercial pectin with that in the underripe fruit is more than is needed. Warm the mixture to redissolve the crystals or strain them out.

**To prevent pectin crystals**, make sure the fruit is ripe but not overripe.

**To prevent crystals resulting from chemical interactions**, warm the jam to redissolve the crystals or strain them out. The crystals are harmless, but may be unsightly.

**Crystals in grape juice could be tartrate crystals.** Let freshly pressed grape juice stand for 24 hours in the refrigerator for tartrate crystals to form and settle out. Decant the juice and leave the sediment. Make jelly from the decanted juice.

### ***Why doesn't my freezer jam have the usual consistency?***

If freezer jam is too firm, stir to soften. Causes of overly firm jam include storing the jam at overly cold temperatures, underripe fruit, and too much pectin.

If a freezer jam separates, stir to blend. Causes of separating jam include overripe fruit or too many larger pieces of fruit and putting jam in the freezer before a good gel has formed.

If jam is too soft, bring it to a boil on top of the stove or in the microwave. It will thicken on cooling. Causes of overly soft jam include overripe fruit, too much sugar, not enough acid, and putting jam in the freezer before a good gel has formed.

## Recipes

### **Uncooked Strawberry Freezer Jam with Pectin**

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

*Yields 2<sup>2</sup>/<sub>3</sub> cups*

Crush strawberries in 1½ quart saucepan. Stir in artificial sweetener, food coloring, powdered pectin, and lemon juice. Bring to a boil and boil for 1 minute. Remove from heat. Continue to stir for 2 minutes. Pour into freezer containers, cover, and freeze. Thaw before serving. Store in refrigerator up to 4 weeks after opening. 1 Tablespoon = 5 calories.

### **Uncooked Raspberry or Blackberry Jam with Pectin**

1 quart cleaned raspberries  
3 to 4 teaspoons liquid artificial sweetener  
1 package powdered pectin  
1 Tablespoon lemon juice

*Yields 2<sup>2</sup>/<sub>3</sub> cups*

Crush raspberries in saucepan. Stir in artificial sweetener, powdered fruit pectin, and lemon juice. Bring to a boil and boil for 1 minute. Remove from heat. Continue to stir for 2 minutes. Pour into freezer containers, cover, and freeze. Thaw before serving. Store in the refrigerator for up to 4 weeks. 1 Tablespoon = 5 calories.

### **Uncooked Berry Jam (using powdered pectin)**

2 cups crushed strawberries or blackberries (about 1 quart whole)  
4 cups sugar  
1 package powdered pectin  
1 cup water

*Yield 5 or 6 half-pint jars*

Sort and wash fully ripe berries. Drain. Remove caps and stems. Crush berries. Place prepared berries in a large mixing bowl. Add sugar, mix well, and let stand for 20 minutes, stirring occasionally.

Dissolve pectin in water and boil for 1 minute. Add pectin solution to berry-and-sugar mixture and stir for 2 minutes. Pour jam into freezer containers or canning jars, leaving 1/2-inch headspace. Cover containers and let stand at room temperature for 24 hours or until jam

sets. Label and freeze. Store up to 4 weeks in the refrigerator after opening.

### **Uncooked Berry Jam (using liquid pectin)**

1<sup>3</sup>/<sub>4</sub> cups crushed strawberries (about 1 quart whole)  
4 cups sugar  
2 Tablespoons lemon juice  
1 pouch liquid pectin

Measure 1<sup>3</sup>/<sub>4</sub> cups crushed strawberries. Place in large bowl. Add sugar; mix well and let stand 10 minutes.

Measure lemon juice into small bowl. Add liquid pectin and stir well. Stir into fruit and sugar and continue stirring for 3 minutes. Pour jam into freezer containers, leaving 1/2-inch headspace. Cover container. Let stand at room temperature until set (up to 24 hours). Freeze or refrigerate.

Source: *So Easy to Preserve* (Fifth Ed.) (2006). Cooperative Extension Service, The University of Georgia, College of Agriculture, Athens.

### **Uncooked Grape Jelly**

2 cups lukewarm water  
1 box powdered pectin  
1 6-ounce can frozen grape juice concentrate  
3½ cups sugar

Mix the pectin slowly into the lukewarm water in a 2-quart mixing bowl. Stir constantly until pectin is completely dissolved. Let stand 45 minutes. Stir occasionally, but do not beat.

Thaw juice by placing can in cold water. When juice is thawed, pour into a 1-quart mixing bowl. Add 1<sup>3</sup>/<sub>4</sub> cups sugar. Mix thoroughly. All the sugar will not be dissolved. Add the remaining 1½ cups of sugar to the dissolved pectin mixture. Stir constantly until all sugar is dissolved. Mix the juice with the pectin mixture. Stir constantly until all sugar is dissolved.

Pour into freezer containers, leaving 1/2-inch headspace. Cover with a tight lid. Let stand at room temperature until set (up to 24 hours). Freeze or refrigerate.

Source: *So Easy to Preserve* (Fifth Ed.). Cooperative Extension Service, the University of Georgia, College of Agriculture, Athens.

### **Uncooked Blackberry or Raspberry Jam**

3 cups crushed blackberries or raspberries  
(about 1½ quarts)  
5¼ cups sugar  
1 box powdered pectin  
¾ cup water

If berries are extremely seedy, put part or all of them through a sieve or food mill. Measure 3 cups of prepared berries and place in a large mixing bowl. Add sugar, mix well, and let stand 10 minutes, stirring occasionally.

Dissolve the powdered pectin in the water, bring to a boil, and boil for 1 minute. Add pectin to berries and sugar and stir for 3 minutes.

Pour the jam into freezer containers, leaving 1/2-inch headspace. Cover container. Let stand at room temperature until set (up to 24 hours). Freeze or refrigerate.

### **Berry Blitz Freezer Jam**

*Featuring Ball® Simple Creations® Freezer Jam Fruit Pectin*

*Makes about 5 (8 oz) half pints*

1 1.59-oz pkg Ball® Simple Creations®

Freezer Jam Fruit Pectin

1½ cups sugar

1 cup crushed blackberries (about 1½ 6-oz containers)

1 cup crushed blueberries (about 2 4.4-oz containers)

1 cup crushed raspberries (about 1½ 6-oz containers)

1 cup crushed strawberries (about 1 1-lb container)

Zest of 1 small lemon

5 Plastic Ball® (8 oz) Freezer Jars

Stir sugar and contents of package in a bowl into well blended.

Add blackberries, blueberries, raspberries, strawberries, and lemon zest. Stir 3 minutes.

Ladle jam into clean jars to fill line. Twist on lids. Let stand until thickened, about 30 minutes. Label.

Refrigerate up to 3 weeks.

### **Refrigerator Jelly with Splenda®**

*Makes about 4 half-pint jars*

2 packages or 2 Tablespoons unflavored gelatin

4¼ cups bottled unsweetened fruit juice

(1 quart plus ¼ cup)\*

1/2 cup Splenda® Granular

Sterilize jars. In a saucepan, soften gelatin in juice.

Bring to a rolling boil, dissolving gelatin; boil 1 minute. Remove from heat. Stir in Splenda® granular. Skim foam if needed. Pour into hot sterilized jars, leaving at least 1/4-inch headspace. Apply lids, cool, and store in refrigerator. (Do not process in a canner or freeze.)

\*This recipe was tested using commercially bottled white grape-peach juice.

Note: Sterilized jars are not required for this recipe; it can be filled into hot, clean jars or plastic refrigerator containers. However, sterilized jars would be best for avoiding spoilage during storage. Refrigerator jellies made with gelatin typically last 1 month in the refrigerator until opened.

Additional recipes for freezer jams and jellies can be found on the Ball Canning web site. Click on recipes and scroll down and click on to jams, jellies, and other fruits. <http://www.freshpreserving.com/pages/home/1.php>

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