COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF ALASKA FAIRBANKS

Food Preservation

Jams & Jellies
Lesson 5

FNH-00562E

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Jelly, jams, and preserves can add zest to meals. They furnish an accent of color, flavor and provide a good way to use surplus fruits. Basically these products are much alike. They are all made of fruit and sugar and are jellied to various degrees.

Jelly is made from fruit juice. It should be clean; sparkling; and hold its shape.

Jam is made from crushed or ground fruit. It tends to hold its shape; but generally is less firm than jelly.

Fruit butter is made by cooking fruit pulp to a thick consistency which will spread easily.

Marmalades are jellies with pieces of fruit suspended in it.

Conserve is a jam-like product made from a mixture of several fruits. A true conserve contains nuts and raisins.

Preserves are whole fruits or large pieces of fruit in a thick syrup.

Ingredients

Proper amounts of four ingredients — fruit, pectin, acid and sugar are needed to make a jellied fruit product.

Fruit provides the flavoring. Selection and handling of fruit are critical to success. You should use top quality fruit that is slightly under ripe or barely ripe.

Pectin, a natural carbohydrate, causes jelly to gel. It is found in varying amounts in different fruits. Slightly underripe fruit contains more pectin than fully ripe fruit. Many recipes call for skins and cores because pectin is concentrated in these area. Pectin is available commercially in a liquid or powdered form. Recipes call for a certain type of pectin-either powdered or liquid. Do not substitute, use whichever form is called for in recipe.

These fruits contain considerable amounts of natural pectin:

- tart apples
- currants
- sour plums
- citrus fruit
- gooseberries
- Concord grapes
- cranberries

These fruits are low in pectin:

- apricot
- blueberries
- pineapple
- rhubarb
- cherries
- strawberries
- peaches

Acid adds to the flavor and helps with gel formation. It is higher in underripe fruits than ripe.

Sugar helps in gel formation. It serves as preserving agent, and improves the flavor. Light corn syrup can be used to replace one-half of the sugar in recipe. Without added pectin, one-quarter of the sugar can be replaced with syrup. If powdered pectin is used, ½ cup of sugar can be replaced with syrup. If liquid pectin is used, 2 cups of the sugar can be replaced with syrup.

Honey can be used to replace sugar, be sure to use a light, mild flavored honey. In recipes without added pectin, honey can replace half of the sugar. If pectin is added, 2 cups of honey can replace 2 cups of sugar in most recipes. In small recipes, ¾ to 1 cup of sugar can be replaced by honey.

Jelly

A large kettle is essential for making jelly. A kettle of 8 to 10 quarts capacity permits the jelly mixture to come to a full rolling boil without boiling over. A clock or watch with a second hand is invaluable for timing. A thermometer, the jelly, candy or deep-fat type, is a great aid in making jelly.

Increasing the size of jelly recipes is not recommended because of difficulties in jelling. Only enough fruit for one batch should be prepared at a time, since the fruit will deteriorate rapidly.

The fruit is boiled in water to extract the juice. For apples and other hard fruits, add enough cold water to cover the fruit in the kettle. For berries and grapes, only use enough water to prevent scorching. Excess boiling tends to destroy pectin, flavor and color.

Strain juice through two layers of cheescloth or through a jelly bag. Don't squeeze fruit, this will add unwanted pulp to the mixture resulting in a cloudy jelly. At this point, the juice is ready and can be used immediately or can be canned or frozen for making jelly at a later time.

Fill jars to within ¼ inch of the top. Wipe top and threads with clean cloth. Seal. Process by boiling water bath for five minutes.

Dip a cool metal spoon into the boiling jelly mixture. When two drops form together and sheet off the spoon, the jelly should be done.

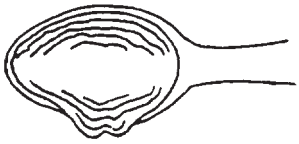
Or Use The Temperature Test

The temperature test is probably more dependable for determining the jellying point. Simply cook your jelly to 8°F over the boiling point of water.

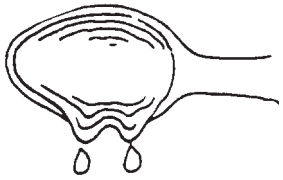
Tests For Jellying Point

Sheet Test

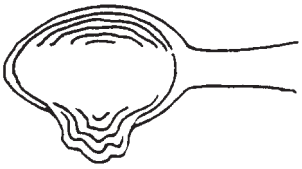
Jelly drops first are light and syrupy.



Then they become heavier and show signs of sheeting.



When jelly point is reached the jelly breaks from spoon in a sheet or flake.



Old recommendations for canning suggested using a thin layer of paraffin to seal jars. This sometimes resulted in spoilage from yeasts and

mold. We now recommend that all jelly and jam products be hot water canned for a minimum of 5 minutes. Higher altitudes require water bathing 10 minutes between 1001 and 6000 feet and 15 minutes from 6001 to 8000 feet.

If Your Jelly Doesn't Gel…

When jelly fails to gel, it is either because there was not enough pectin present, or because inaccurate measuring, insufficient cooking, over cooking, or a doubled recipe prevented the pectin from doing it's job properly. Recooking may remedy the situation. If it doesn't, use the jelly as pancake or waffle syrup or spoon over ice cream.

If you used powdered or liquid pectin in the original jelly, add more of the same kind and follow the proportions and instructions given below.

To recook jelly with powdered pectin:
Measure the jelly to be recooked. For each quart of jelly, measure and set aside ¼ cup sugar, ¼ cup water, and 4 teaspoons powdered pectin. In saucepan or kettle, mix the powdered pectin and water; bring to boiling, stirring constantly. Add the soft jelly and the sugar; stir thoroughly. Bring mixture to full rolling boil over high heat, stirring constantly. Boil hard for 30 seconds. Remove recooked jelly from heat; skim foam from top. Pour jelly into hot sterilized jars or jelly glasses; seal immediately.

To recook with liquid pectin:
Measure the jelly to be recooked. For each quart of jelly, measure and set aside ¾ cup sugar, 2 tablespoons lemon juice and 2 tablespoons liquid pectin. Bring jelly to boiling over high heat. Quickly add the sugar, lemon juice, and pectin, and bring to a full rolling boil, stirring constantly. Boil hard for one minute. Remove the recooked jelly from heat; skim off foam. Pour into hot sterilized containers and seal immediately.

Rhubarb-Strawberry Jam

1 cup cooked red-stalked rhubarb (about 1 pound rhubarb and ¼ cup water)
2½ cups crushed strawberries (about 1½ quart boxes)
6½ cups sugar
½ bottle liquid pectin

To prepare fruit. Wash rhubarb and slice thin or chop; do not peel. Add water, cover, and simmer until rhubarb is tender (about one minute). Sort and wash fully ripe strawberries; remove stems and caps. Crush berries.

To make jam. Measure prepared rhubarb and strawberries into a kettle. Add sugar and stir well. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Boil hard for one minute, stirring constantly.

Remove from heat and stir in pectin. Skim.

Fill and seal containers. Process five minutes in boiling water canner for altitudes under 1000 feet, ten minutes for 1001 to 6000 feet and 15 minutes for 6001 to 8000 feet. Makes seven or eight half-pint jars.

Spiced Blueberry Jam

4½ cups blueberries
7 cups sugar
½ teaspoon cinnamon
1 lemon, juice and grated rind
½ teaspoon cloves
6 ounces liquid pectin

Prepare lids. Open liquid pectin pouches and stand upright in a cup or glass. Place blueberries, cinnamon, cloves, sugar, lemon juice and grated lemon rind in a saucepan. Simmer for 5 minutes. Remove from heat; add liquid pectin. Stir and skim off foam. Immediately pour jam into hot canning jars, leaving ¼ inch head space. Wipe jar rims and add prepared two-

piece lids. Process 15 minutes in a boiling water bath.

Cherry Jelly

(*with powdered pectin*)

3½ cups cherry juice (about 3 pounds or 2 quart boxes sour cherries and ½ cup water)
1 package powdered pectin
4½ cups sugar

To prepare juice. Select fully ripe cherries. Sort, wash, and remove stems; do not pit. Crush cherries, add water, cover, bringing to boil over high heat. Reduce heat and simmer for ten minutes. Extract juice.

To make jelly. 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 one minute.

Remove from heat; skim off foam quickly. Pour jelly immediately into hot containers and seal. Process five minutes in boiling water canner. Makes about six 8-ounce glasses.

Grape Jelly

(*from concentrated juice*)

12 ounces concentrated grape juice
2½ cups water
4½ cups sugar
1 box powdered pectin

Sterilize jars. Measure sugar and set aside. Mix juice and water in a saucepot. Stir in powdered pectin. Bring to a full boil over high heat, stirring constantly. At once, stir in sugar. Stir and bring to a full rolling boil (one that cannot be stirred down) stirring constantly. Boil hard for 1 minute.

Remove from heat; quickly skim off foam. Pour jelly immediately into hot canning jars, leaving ¼ inch headspace. Wipe jar rims, place flats and rings on jars. Process 5 minutes in a boiling water bath.

References

USDA Complete Guide to Home Canning. Online version: www.uga.edu/nchfp/publications/publications_usda.html. Print version ($18): https://mdc.itap.purdue.edu/item.asp?itemID=19265&ListType=&subcatID=68&catID=26.

So Easy to Preserve. $18. University of Georgia Cooperative Extension Service: www.uga.edu/setp.

Ball Blue Book. Ball Corporation, Consumer Products Division, Consumer Affairs, 345 S. High, Muncie, IN 47305-2326.

Collecting and Using Alaska's Wild Berries and Other Products. $10.00. University of Alaska Fairbanks Cooperative Extension Service: 1-877-520-5211 or www.uaf.edu/ces.

For more information, contact your local Cooperative Extension Service office or Roxie Rodgers Dinstel, Extension Faculty, Health, Home and Family Development, at 907-474-2426 or rrdinstel@alaska.edu.

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