

Low Sugar Jams and Jellies

Sugar Reduction in Regular Jam

Depending on the fruit used, there have been varying degrees of success reducing the sugar in regular jams and jellies by up to 1/4 the amount listed in the recipe. The flavor, texture and color will be somewhat different.

Unless there is a health reason for limiting the sugar in a product, it is recommended that the recipe be followed "as is" for the most successful product. Each tablespoon of jam has only 32 calories. It may be easier to limit the amount of jam used than to reduce the sugar and end up with an inferior product.

Low-Sugar Alternatives

There are several low sugar products on the market. These pectin products have been specially designed to make jams and jellies with less sugar. They are labeled as "light jells" or "light fruit pectin." Follow the manufacturer's directions that come with the product.

With many of the methods some experimentation is necessary to produce a product suitable to your family's tastes and needs. These spreads are low in sugar, so in order to prevent spoilage, they need to be processed and sealed for shelf storage, or stored in the freezer. For short periods of time, they can be stored in the refrigerator.

Low Methoxyl Pectin Jams and Jellies

The use of low methoxyl pectin in making low sugar jams and jellies has proven very successful. Low-methoxyl pectins (LMP) are pectic substances derived from fruits as are regular pectins. To make the LMP structure, the pectin form is changed so as to free some of the carboxyl groups on the molecule. These modified pectins can bond with calcium ions to form a gel in the absence of sugar and acid.

LMP must be purchased commercially. It can be found at many cooperative and health food stores. If tightly sealed, it can be stored indefinitely. Because this pectin does not readily dissolve in liquid, and becomes very lumpy, it is suggested that a small amount of sugar be used to mix with the dry pectin so it will dissolve more readily when added to the crushed fruit or juice.

A calcium salt is needed to make the gel. Dicalcium phosphate salt is usually sold with LMP for this purpose. The salt is mixed with water at the rate of 1/4 teaspoon dicalcium phosphate per 1/4 cup water. The amount of calcium solution needed will vary with the degree of hard water. The salt does not dissolve readily in water, so before measuring, mix the solution thoroughly and measure amount needed while the liquid is cloudy.



Acid such as lemon juice is not needed to promote gel formation, however, it can be added to the jam or jelly to enhance the flavor and color of the product.

LMP Jam and Jelly Recipe

1/4 cup sugar, more or less to taste
1/2 teaspoon LMP
1 cup prepared crushed fruit or juice
1 teaspoon calcium solution*

NOTE: This recipe is a general formula and can be adjusted to the amount of fruit or juice you have.

*Make calcium salt solution using 1/4 cup water and 1/4 teaspoon dicalcium phosphate.

Thoroughly mix together sugar and LMP, set aside. Prepare fruit pulp or juice and place in a pan, bring to a boil. Add LMP-sugar mixture. Boil 1 minute to dissolve pectin and sugar. Add calcium solution and stir well. Pour hot jam or jelly into hot jars. Adjust lids, process 10 minutes in a boiling water bath. Jams and jellies can also be frozen for long storage or stored in the refrigerator for short periods of time. It will take several hours for the jam or jelly to set up.

LMP Jam and Jelly (liquid pectin method)

1. Liquify pectin by pouring 1 cup boiling water into a blender. With blender running at low speed add 2 Tablespoons low-methoxyl pectin powder and blend until thick.
2. Wash jars and keep hot in water bath canner. Prepare lids and keep them hot.
3. Recipe for Jam and Jelly (liquid pectin method):

<u>Jam</u>	<u>Jelly</u>
1 cup fruit pulp	1 cup juice
1/4-1/2 cup sugar or honey	1/4-1/2 cup sugar or honey
4 teaspoons liquid pectin	3 Tablespoons liquid pectin
1/2 teaspoon calcium solution*	1/2 teaspoon calcium solution*

*Make calcium solution using 1/4 cup water and 1/4 teaspoon dicalcium phosphate. Shake before measuring.

4. Measure fruit juice or pulp into a large pan. Add sugar or honey. Bring to a boil. Add liquid pectin and boil 1 minute. Remove from heat and stir in 1/2 teaspoon liquid calcium.
5. Pour into jars, seal and process in boiling water bath for 10 minutes. Fruit may float to the top. Shake after 30 minutes.
6. Leftover liquid pectin and calcium will store in refrigerator up to 1 month. Warm pectin to room temperature before using.

Problems with LMP spreads

Making LMP jams and jellies is not an exact science. There are many factors which influence the quality of the product. Some of the common problems are as follows:

Product too stiff! Too much calcium added. Water was probably too hard. Heat the jelly and add a little more juice.

Product too thin! Not enough calcium added. Heat the jelly, add a little more calcium solution.

Product Molded! The product is low in sugar so must be processed in a boiling water bath, frozen for long storage, or kept in the refrigerator for short storage.

Jams and Jellies Made With Gelatin

Unflavored gelatin can be used to thicken fruit pulp or juice to make unsweetened jams and jellies. These products have a texture similar to gelatin desserts. They must be stored in the refrigerator.

Strawberry Jam with Gelatin (Makes 1 pint)

1 1/2 teaspoons unflavored gelatin
1 1/2 Tablespoons cold water
3 cups crushed, prepared strawberries
Sugar or honey can be added to taste.
1/4 teaspoon ascorbic acid powder or 1 Tablespoon lemon juice
Red food coloring as desired

Soften gelatin in cold water. Combine strawberries and sweetener in a saucepan. Place over high heat and stir constantly until mixture comes to a boil. Remove from heat, add softened gelatin; return to heat and continue to cook for 1 minute. Remove from heat; blend in ascorbic acid powder and food coloring. Ladle into clean jars, leaving 1/2 inch head space. Cover. Store in freezer or refrigerator.

Grape Jelly with Gelatin (Makes 1 1/2 pints)

2 Tablespoons unflavored gelatin powder
1 bottle (1 pt., 8 oz.) unsweetened grape juice
2 Tablespoons unsweetened lemon juice
Sugar or honey can be added to taste.

In a saucepan, soften gelatin in grape juice and lemon juice. Bring to a rolling boil, dissolving gelatin; boil 1 minute. Remove from heat. Stir in sweetener. Pour into hot sterilized jars. Seal. Store in refrigerator.

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