International Journal of Advanced Research and Review

www.ijarr.in

NUTRITIVE VALUES AND PROCESSING OF JELLIES OF VARIOUS FRUITS AND VEGETABLES IN HOME

Syed Masood Shah, Nabila Khan and Rabia Shabir

Department of Food Science and Technology, The University of Agriculture Peshawar, Pakistan.
Email: s.masoodshah@aup.edu.pk

ABSTRACT

Now a days Jellies are achieving high popularities among the community. The qualitative analysis of market available low quality Jellies are not full filling the nutritive value and appear to be very hazardous to human health. For this very purpose this article is generalized about the full description and nutritive values of jellies along with the methods of making it in homes and all the basic information is gathered from trusted sources online. This article summarize briefly the making of Jellies in home with high nutritive values.

KEY WORDS: Jelly, Nutritive value, Making in home and human health.

INTRODUCTION

Preserving foods was a home-based operation until the nineteenth century. Even today, millions of people make fruit preserves in their own kitchens. Whether in the home kitchen or in a modern food processing plants, the procedure is essentially the same. Fruits are chopped and cooked with sugar and pectin until a gel is formed. The jam or jelly is then packed into sterilized jars.

Jellies are spreads typically made from fruit, sugar, and pectin. Jelly is made with the juice of the fruit; jam uses the meat of the fruit as well. Some vegetable jellies are also produced.

It is difficult to pinpoint when people first made a fruit spread. Ancient civilizations were known to set a variety of foods in the sun to dry in order to preserve them for later use. One of the first recorded mentions of jam making dates to the Crusades whose soldiers brought the process back from their journeys in the Middle East.

Fruit jellies are semisolid, preserved mixtures of fruit juice and sugar. Jelly making is a good way to preserve fruit flavors for enjoyment throughout the year. Fruit jelly is a fairly easy-to-prepare product for the beginning canner and may be made at home without much special equipment.

Because of its high sugar content, jelly is mainly a source of calories and should be used sparingly by persons on weight control diets. One tablespoon of most jellies contains 50 calories.

A new product for making jelly and jam with a lower sugar content is available in supermarkets. It contains vegetable gums as thickening agents, preservatives to prevent yeast and mold growth, and organic acids for acidity control. The calorie-reduced jams and jellies made with this product must be stored in the refrigerator after opening.

Jellies are made from a variety of fruits, either singly or in combination. Most of the fruits are harvested in the fall. The level of ripeness varies. Pears, peaches, apricots, strawberries, and raspberries gel best if picked slightly underripe. Plums and cherries are best if picked when just

ripe. The fruit is purchased from farmers. Most jam and jelly producers develop close relationships with their growers in order to ensure quality. The production plants are built close to the fruit farms so that the time elapsed between harvest and preparation is between 12-24 hours.

INGREDIENTS

Substances essential for fruit jelly making are fruit flavor, pectin, sugar, acid, and water. A pectin gel or jelly forms when a suitable concentration of pectin, sugar, acid, and water is achieved.

FRUIT FLAVOR

The fruit flavor is provided by the fruit juice. For some fruit jelly, a mixture of different fruit juices is used. The fruit juice may also supply some or all of the pectin and acid. Fruit juice is the source of water in jelly.

PECTIN

Fruits and their extracts obtain their jelly forming ability from a group of substances called pectins. Pectin provides the three dimensional structure which results in a jellied product.

Pectin is formed from a parent compound, protopectin, during the ripening of fruit and during the cooking of underripe fruit to extract juice. Fully ripe fruits contain less pectin than partially ripe fruits. For this reason, some jelly recipes specify the use of a portion of underripe fruit.

All fruits contain some pectin. Apples, crabapples, gooseberries, some plums, and highbush cranberries usually contain enough pectin to form a pectin gel. Other fruits, such as strawberries, cherries, or blueberries, contain little pectin and can be used for jelly only if combined with fruit rich in pectin, or combined with commercial pectin products (these methods are described under Short Boil jelly).

TEST FOR PECTIN

If jelly is to be made without added pectin, it is a good idea to test the pectin content of the fruit juice with this easy method. Measure 1 tablespoon of rubbing alcohol into a small glass. Add 1 teaspoon of extracted fruit juice and let stand 2 minutes.

If a good solid mass forms, enough pectin is naturally present in the fruit juice to form a pectin gel. If only a small weak mass forms, there is not enough pectin to form a gel and commercial pectin should be used in the jelly making. Do not taste this mixture**.**

ACID

A certain level of acidity (below pH 3.5) must be present for a jelly to form. If the fruit juice is not sufficiently acidic, a gel will not form. If too much acid is present, the jelly will lose liquid or weep.

TEST OF ACID

A rough index of the acidity of fruit juice is the juice's tartness. To form a gel, fruit juice should be as tart as a mixture of 1 teaspoon of lemon juice and 3 tablespoons of water. If the fruit juice is not this tart, add 1 tablespoon of lemon juice for each cup of fruit juice.

Commercial pectin products contain organic acids, like fumaric acid, which assure gel formation.

SUGAR

Sugar helps in gel formation, contributes flavor to the jelly, and at the concentration of 55 percent by weight, serves as a preservative. Cane sugar or beet sugar (both sucrose) is the usual source of sugar in jelly or jam. Corn syrup or honey can replace part of the sugar in jelly recipes. The flavor

of the fruit may be overcome if too much honey or corn syrup is substituted. To substitute honey or corn syrup for sugar use these amounts.

FOR NO-PECTIN-ADDED JELLY
Corn syrup may replace ¼ of the sugar. Honey may replace ½ the sugar.

FOR PECTIN-ADDED JELLY
Powdered pectin: Corn syrup may replace up to ½ the sugar. Honey may replace up to 2 cups of sugar.

LIQUID PECTIN
Corn syrup or honey can replace up to 2 cups sugar.
Do not attempt to reduce the amount of sugar called for in traditional recipes. Reduction in the amount of sugar will interfere with gel formation and result in a product in which yeasts and molds can grow.

EQUIPMENT
The following equipment may be needed depending on the method of jelly preparation:

- Large, flat-bottom kettles (6 to 8 quart size)
- Cheesecloth
- Jelly bag and stand
- Colander
- Jelly or candy thermometer
- Canning jars with 2-piece lids

FILLING JARS AND HEAT PROCESSING
A research study conducted at the University of Minnesota demonstrated that heat processing jelly for 5 to 15 minutes had no harmful effect on the products. Those tested included ones made with liquid and powdered pectin, as well as traditional no-pectin-added ones. In addition, the heat processing gives a better seal, and destroys mold that may be present on the top surface of the product.

METHODS OF MAKING JELLY
The two methods of making jelly follow:

STANDARD OR LONG BOIL METHOD
Extracted juice and sugar are boiled long enough to form a gel. This method should be used only for fruits that contain an adequate amount of pectin. It is not possible to use commercially canned juices because they do not contain sufficient pectin. This type of jelly has a richer flavor than pectin-added jelly. The most difficult part of this method is knowing when the jelly is done.

SHORT BOIL OR PECTIN-ADDED JELLY
Powdered or liquid pectin, sugar, and extracted juice are combined and quickly cooked to make a gel. Use extracted fruit juice from fresh fruit or commercially canned fruit juice. The order of combining ingredients depends on the type of pectin used. When making pectin-added jelly, it is most important to carefully follow the pectin product directions.

Pectin-added jelly uses more sugar and gives greater yield than jelly made by the standard method and avoids the need to test for doneness.

Here are the directions for making a jelly by each method. Many recipes for jelly products appear in cookbooks or the leaflets in pectin products. Check any recipe to determine which type it is before starting to prepare the jelly. When making jelly, work in small cooking lots. Don't try to double or triple the recipe. This often results in a very poor quality product.

CONCLUSION

The basics of making Jellies and understanding the nature of Jellies along with its nutritive value is summarized and it is to be concluded that one can prepare and enjoy the Jellies while making it in home.

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