STRAWBERRY FLAVOURED JAM

Strawberry flavoured jam can be made from Ash gourd and artificial strawberry flavouring. Ash gourd is a cheap fruit which can be stored for up to a year without deterioration. It is fairly tasteless and so can be flavoured to make a number of products. The yield of usable fruit material from whole fruit is approximately 75%. Ash gourd has enough natural pectin present to make a good jam without the addition of artificial pectin.

Recipe

Fruit pulp	44%	
Sugar	55%	(starting recipe
Citric acid	0.53%	before boiling)
Strawberry flavouring	0.12%	
Colouring	0.032%	

In most countries, preservative is not allowed to be added to the jam. Only a residue of preservative is allowed in jam which has been made from fruit pulp which has been stored with chemical preservatives, (100ppm sulphur dioxide or 500ppm benzoic acid). Citric acid is not a preservative, it is added to adjust the pH. Jams give a gel when there is the correct ratio of pectin to water and the pH is between 2.5-3.45pH. The optimum pH to give a good gel is pH 3.0

Method

Wash whole fruits in clean water and discard any bad part of the fruit.

Remove the skin from the gourd and cut the flesh into small pieces. Boil the pieces up with some water for about half and hour until they are soft. Remove the pieces from the water and mash them into a smooth pulp.

Mix the fruit pulp, sugar and citric acid in a stainless steel saucepan and start boiling the mixture. Near the end of the boiling process the colour and flavouring should be added, this ensures these two ingredients are not heated for longer than necessary resulting in their loss. Jam should not be boiled for more than 12-15 minutes otherwise this can give rise to caramel flavours, over sweetness and discoloration, apart from being a waste of energy. By reducing the amount of water in the starting recipe, the boiling time can be reduced. The 'end point' is reached when the total soluble solids is up to 70%, this is measured with a refractometer, (In most countries the legal minimum sugar levels in jam, are 65% in hermetically sealed containers, and 68.5% in non air tight containers.) 70% gives a safety factor. Jam with over 70% sugar can give problems during storage as sugar will recrystallise out into large chunks. The 'end point' is usually reached around 106-108°C (depending on barometric pressure and height above sea level).

When the jam has nearly reached this temperature samples are taken and tested on a refractometer, the sample must be cooled before being measured. This can be done be smearing it on a cold dry plate or saucepan lid. All implements used to take the sample must be dry, otherwise the reading will be reduced. It is important to stir the jam at all times during the heating process, otherwise burning will occur at the bottom of the saucepan, causing off flavours and discoloration. When the 'end point' has been reached the jam should be filled into jars which have been cleaned and then steamed to sterilise them, and are still hot so that the jars do not crack. The jars should be filled as quickly as possible so that the jam is not heated for longer than necessary, or recontaminated because it has cooled down before being sealed in the jar.

Knowledge and Information Services, The Schumacher Centre for Technology & Development
Bourton Hall, Bourton-on-Dunsmore, Rugby, Warwickshire CV23 9QZ, UK
Tel +44 (0)1926 634400 Fax +44 (0)1926 634401 E-mail inforserv@itdg.org.uk Web http://www.itdg.org

The lip of the jar should be clean and dry (wipe with clean tissue paper) before placing the lid on it. The filled jars can be placed in water to cool down the jam so that it does no keep cooking in the jar, the water level should be kept below the lid of the jar. The gel formation takes place as the temperature comes down to around 55°C, if the jam is moved when the gel is forming the gel structure will be broken and the jam will not set.

Equipment list

Jars, Omnia lids and labels
Omnia capper
Cooking facilities, gas ring, electric ring, etc
Stainless steel saucepan
Thermometer in protective jacket
Stainless steel cutting knife and spoon
Wooden spoon for stirring
Refractometer
Steam generator
Cutting board
Scales
Measuring cylinder
Funnel
Liquidiser
Mashing tool