

CLUTHA DISTRICT COUNCIL

ADVICE FOR OCCASIONAL FOOD PREMISES

JAMS & PRESERVES

The Council is permitted by the Food Hygiene Regulations to treat fundraising operations as occasional food premises, allowing the organisers to operate without a registered food premises being used.

While some of the strict physical requirements of the above regulations are relaxed for such situations, it is important to note that the conduct and maintenance provisions of the Regulations remain in force. Some key areas of interest that may relate to your operation are as follows: -

Product Quality

Jams and jellies can present their own special problems in terms of the quality of the product. The following information is reproduced with the kind permission of the University of Georgia. The author is Associate Professor Elizabeth L. Andress, Ph.D Associate Professor and Extension Food Safety Specialist, Department of Food and Nutrition. Our apologies if any of the Georgian terminology does not translate to Kiwi.

Even though sugar has a preservative action in jams and jellies, moulds can still grow and spoil these products. Mould growth causes product to be lost when it occurs. In addition, some research indicates that mould growth on fruit products may not always be as completely harmless as believed in the past. USDA and the Cooperative Extension Service are endorsing a boiling water canning process for jams and jellies which will make the potential for mould spoilage as small as possible. The cost of ingredients is high enough to make any preventable loss unacceptable.

Paraffin or wax sealing of jars is no longer considered an equally acceptable choice for any sweet spread, including jellies. Any pinholes, shrinkage or cracks in the wax paraffin allow airborne moulds to contaminate and grow on the product. In addition, leaks or holes in the paraffin can allow product to seep out during storage and once on the surface, it will provide nutrients for moulds to grow on the surface and enter into the jam or jelly in the jar.

Follow These Steps in Making Jam or Jelly at Home:

1. Wash canning jars (half-pint or pint size) in hot water with detergent and rinse well by hand, or wash in a dishwasher. Pre-sterilise the clean jars by submerging them 10 minutes in boiling water. The easiest way is to stand the empty jars upright on a rack in a boiling water canner filled with clean water. There should be enough water to fill the jars and still come to a level 1-2 inches above the tops of the jars. Bring the water to a boil and boil for 10 minutes. Jars can remain in the hot water until they are ready to be filled.
2. Prepare two-piece canning lids according to the manufacturer's recommendations.

3. Prepare jam or jelly according to recipe directions. Boil for the recommended time in the recipe and then **quickly** skim off foam (if needed or desired).
4. Remove pre-sterilised jars from the hot water one at a time, tilting them to quickly empty them into the canner. To make sure they are completely drained, they may be turned upside down on a clean towel on the counter top. Fill quickly with the **hot** jelly or jam mixture, leaving 1/4 inch headspace. Wipe the sealing surface of the jars with a clean paper towel, dampened with hot water, to remove any jelly, jam or sugar crystals. Adjust lids.
Work quickly to insure that the filled jars stay as hot as possible until all are filled and ready to load into the canner for processing. However, remember the jam or jelly mixture is **very** hot and take precautions not to burn yourself.
5. Load the filled jars, fitted with lids, into the canner one at a time, using a jar lifter. Keep the jar upright at all times. Tilting the jar could cause the hot jelly or jam mixture to spill into the sealing area of the lid, which should remain clean and undisturbed. The water in the canner can be close to boiling when the jars are added, if you have made sure the filled product has remained very hot until the canner load is ready.
6. Turn the heat under the canner to its highest setting, cover the canner with its lid and heat until the water boils vigorously. Process the jars for 5 minutes after the water boils. The water level in the canner should be 1-2 inches above the tops of the jars. The water in the canner must remain boiling during the entire 5 minutes, so keep the heat source on high and a tight lid on the canner.
7. Remove jars from canner after the process time is up; use a jar lifter and keep jars upright. Carefully place them directly onto a towel or cake cooling rack, leaving at least one inch of space between the jars during cooling. Avoid placing the jars on a cold surface or in a cold draft.
8. Cool jars **upright** for 12-24 hours while vacuum seal is drawn and jam or jelly sets up. Let the jars sit undisturbed while they cool. Do not tighten ring bands on the lids or push down on the centre of the flat metal lid until the jar is completely cooled.
9. Remove ring bands from sealed jars. Put any unsealed jars in the refrigerator and use these first.
10. Wash jars and lids to remove all residues. Label and store in a cool, dry place out of direct light.

Do I have to pre-sterilise the jars?

If the jars are not pre sterilised, the process time in the boiling water canner is 10 minutes. Jars should still be washed in hot water with detergent and rinsed well by hand, or washed in a dishwasher, and kept warm until they are ready to be filled.

Pre-sterilisation of jars (and thus the five minute process time) is preferred when the fruits may not be naturally high in pectin, since the longer process time in the canner without pre-sterilised jars may weaken these gels.

Are there other methods of sealing jars?

Some other methods of sealing jars call for inverting a closed, filled jar of hot product for anywhere from thirty seconds to one hour. (Inverting is turning the filled jar upside down on its lid.) While this inversion process can be successful in producing a sealed jar, it works best with very hot product. Individual variation in practicing this process or unexpected interruptions can result in delays between filling jars, getting lids screwed on, and inverting the jars. If the product cools down too much, the temperature of the product can become low enough to no longer be effective in sealing jars or preventing spoilage.

When the inversion process does work, the vacuum seals of filled jars still tend to be weaker than those produced by a short boiling water canning process. A weak seal is

more likely to fail during storage. In addition, the headspace of the jar may retain enough oxygen to allow some mould growth if airborne moulds contaminated the surface of the product as the jar was filled and closed. More complete removal of oxygen from the headspace also offers some longer protection from undesirable colour and flavour changes with some types of fruit products.

The canning process is therefore a more foolproof method of making jams and jellies that will not spoil. In addition, although no cases of burning have been reported in the news media, experience has shown that some people will experience leaking of the hot product from the jar when it is turned over if the lid wasn't put on just right. If hot enough, someone could get burned. Even if it doesn't cause burns, leaking means product is lost.

Should I worry about mould?

But is there a safety hazard in some moulding of a jam or jelly? The best answer is that there is a potential risk. However, we want to make a recommendation that minimises all potential problems and hazards. Some moulds growing on fruit products made at home have been shown to produce "mycotoxins", or mould poisons. The danger to humans from consuming mycotoxins, as well as the actual expected incidence of mycotoxins from mouldy jars of jams, are issues with no easy answers. But, animal studies indicate there is the potential for poisonous effects of some mycotoxins in humans. Patulin is one mycotoxin detected in a few tested jars of homemade apple jam and juice. Patulin has been shown to be carcinogenic in animals, but its role in causing human disease is not all that clear. It is also difficult to assess the actual health risk from consuming mouldy jam or jelly because not all moulds produce mycotoxins, and moulds which do produce them vary in consistency of production when conditions change some.

Summary

Because we are interested in recommending jam and jelly making procedures that offer the highest quality, the least health and safety risks, and the lowest chance of losing product, all recommendations for jams and jellies include a boiling water canning process for room temperature storage of sealed jars. Standard canning jars used with self-sealing flat metal lids and screw bands, pre-sterilisation of clean canning jars, hot filling of product into the jars, and processing for 5 minutes in a boiling water canner are recommended for highest quality and to prevent mould growth.

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Other Important Information

- Provided that only jars of jams or jellies are being sold, there are very little risks outside of those in the preparation of the product that need to be remembered. Helpers should have a clean appearance with well washed hands. In addition a supply of waterproof dressings must be provided in case of cuts or sores. If non-waterproof dressings are used (i.e. Band-Aids) then a disposable latex glove must be worn over the top, as ordinary dressings allow bacteria to pass through, placing food at risk of contamination.
- The labelling of food products is very important, particularly in view of the fact that items are being sold that are very likely to be stored in household cupboards for reasonable lengths of time. Labels will enable the purchaser to know who manufactured the product, what it is and when it was made.

- Be sensible concerning the areas in which you choose to work. Remember that you are handling food products that people will eat and make sure that the premises you use are clean and presentable. Your customers will judge you by these considerations even though you are not a full time food business.

Should you require any further information or assistance, please do not hesitate to contact the Council's Environmental Health Officers at:-

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