

## **Advice on making Jams, Honey, Chutney and Flavoured Oils at home**

### **WHAT ARE THE HAZARDS?**

#### **Clostridium botulinum**

Clostridium botulinum is a type of bacteria that grows under anaerobic conditions (i.e., without air) and can produce a harmful toxin (poison) in food which causes the serious illness botulism. This is a potentially fatal form of food poisoning, although it is rare in the UK.

The spores of C. botulinum are widely distributed in the environment and may be present in a range of foods, including fruit or vegetable ingredients used to make chutneys, jams, pickles, and flavoured oils. Storing these products in sealed bottles (and particularly storing them in oil) can create the right conditions for the bacteria to multiply and produce botulinum toxin.

#### **Jams, chutneys, pickles and flavoured vinegars:**

Due to the high sugar content in jam and the acidic nature of chutneys, pickles, and flavoured vinegars, any harmful and/or spoilage bacteria are unlikely to grow. Because some fungi are more tolerant of acid and or high sugar conditions, there is a small possibility of them growing, depending on the recipe, how the product is made and stored as well as how long and under what conditions it is kept once opened.

**Flavoured oils** are different because they are not acidic. Outbreaks of Clostridium botulinum have been associated with flavoured oils because they normally have a pH higher than 4.5 and the oil provides an air-free environment for the spores to germinate and the bacteria to multiply and produce toxin.

Trace amounts of moisture could create an environment for bacteria to survive and grow, and this can potentially be added in the form of vegetables, spices, herbs, or bottles that have not been thoroughly dried.

**Moulds and yeasts** can contaminate products if the jars, bottles, or lids are not clean or if the product is not sealed quickly after filling. Growth can then occur once the product is opened and exposed to air.

**Physical contamination** Cracked or chipped jars, bottles or damaged lids can cause physical contamination of the product as can foreign objects harvested with fruit and vegetables e.g., stones, slugs and insects. There may also be an increased risk of microbiological contamination.

## **What should I do to control the hazards?**

### For all products

1. Wash your hands before preparing or handling food.
2. Ensure chopping boards, pans and utensils are clean and kept in good condition.
3. Allergen contamination: If you are producing in a domestic setting, you must look critically at your controls because of the risk that any food you produce for sale could have cross contact allergen contamination. Clean hands and overclothing and use of clean and segregated utensils, equipment and surfaces are important. Signage/labelling should indicate that the item is home produced.
4. Use clean disinfected jars/bottles and invert them after disinfection until you are ready to fill them, to prevent foreign body contamination. Disinfect them by placing them in the oven (10 minutes at gas mark 3/160°C), by passing them through the hot cycle of the dishwasher or submerging them in hot water (above 90°C) for 10 minutes. The jars or bottles must be fully dry before use.
5. Store products in a cool, dry environment.
6. Unless you have undertaken independent analysis it is difficult to determine an appropriate shelf-life for your product. Some recipes give an indication of shelf-life, but this may not have been assessed by a microbiological laboratory. Never exceed the shelf-life and it would be sensible to give your products a shorter shelf life than stated unless you have used an accredited microbiological laboratory to undertake a shelf-life study.
7. Always stick to standard recipes and cooking methods; the amount of vinegar and/or sugar is essential for safety. For example, ensure weights of ingredients are known and follow instructions on how long to boil/simmer each batch.
8. Keep records of each batch produced. This would typically include the food name, date of production, number of jars/bottles produced, use by or best before date, lot or batch number, records of any temperatures or pH measurements.

### If you supply other businesses

You must be able to identify what you have supplied them with in case you need to recall the food in the event of a problem.

### **For jams, pickles, and chutney**

1. Thoroughly wash, dry and where necessary peel fresh fruit, vegetables, and herbs.
2. Ensure lids/stoppers are clean and tight fitting but do not re-use lids. Lids must be put on immediately after bottling, whilst the product is still hot for the vacuum seal to be formed.
3. Use a jam thermometer to ensure the jam is heated to the correct temperature (setting point). Jam sets around 105°C. Heating to this temperature will destroy a significant number of harmful bacteria. The setting point of low sugar jams will vary.
4. For pickles and chutneys, it is important to ensure the pH is 4.5 or lower and/or the water activity is below 0.9 throughout the product during the shelf life to control the risk of *C. botulinum*. If this cannot be guaranteed, products should be stored in a refrigerator, even

before they are opened, and the shelf life must be a maximum of 10 days.

### **Extra controls for flavoured oils**

1. When making oils, use dried herbs, spices, and vegetables to ensure that moisture levels are kept to a minimum or thoroughly dry ingredients well before adding. The bottles used should be completely dry before use to store flavoured oils.
2. Ensure that the pH is consistently pH 4.5 or lower throughout the product including the added ingredients. Acids including phosphoric, citric, or acetic acid can be added to oils to help reduce the pH. To accurately measure pH levels, the use of pH meters is required. Litmus paper can offer a guide but this is not very accurate method of measuring pH levels. This is a critical control point and must be followed to protect consumer safety.
3. The maximum shelf life of the product should be 10 days. It can be kept for longer if the pH is shown to be 4.5 or lower for the duration of its shelf life. This must be determined by independent analysis.

### **LABELLING**

A summary of the requirements of The Food Information Regulations 2014 is given below.

**If you are selling food via another retailer, the food is to be sold pre-packed and must be labelled with the following information:**

- Name of the food – a name sufficient to inform a purchaser of the food's true nature and distinguish it from other products with which it could be confused. This may be a reserved description (see below under jam, jelly, and marmalade).
- List of ingredients - in descending order by weight. The source of any animal or vegetable oil or fat ingredient must be provided e.g., beef fat, palm oil, and the description 'fully or partly hydrogenated' if relevant.
- Percentage quantity declaration for any ingredients given emphasis on the label such as in the name of the food or by pictures e.g., apricot chutney would require a declaration of the percentage of apricot used.
- Any specified allergens or ingredients derived from the allergens must be highlighted in the ingredients list by font, style or colour. The specified allergens are cereals containing gluten, crustaceans and molluscs, eggs, fish, soybeans, milk, peanuts, nuts, celery, mustard seeds, sulphur dioxide and sulphites (above 10mg/kg or 10mg/L), sesame seeds and lupin. More information on food allergen labelling can be found at <http://www.food.gov.uk/business-industry/allergy-guide>
- The name and address of the manufacturer, packer, or seller.
- A best before or use by date. 'Use by' dates relate to food safety and 'best before' to food quality. Flavoured oils should have a 'use by' date. It is deemed to be a sale of unsafe food if sold past the 'use by' date and is an offence.
- Any special storage conditions or instructions for use (e.g., flavoured oils 'store in the fridge below 8°C before and after opening').
- Alcoholic strength where there is more than 1.2% alcohol by volume (alcohol x%vol.)
- If any ingredient that has been irradiated or genetically modified this must be declared.

- A minimum font size has been set for all the information, the height of the letter 'x' in the chosen font must not be less than 1.2mm. The new regulations have changed the format of nutritional labelling and will make nutrition information a requirement for many foods but there are some exemptions. *Please check with Devon County Council Trading Standards for further details.*

### **Food sold pre-packed for direct sale or loose does not require full labelling**

Food is sold pre-packed for direct sale where it is sold at the premises where it was packed or from a stall owned by the person who packed the food.

- Name of the food – a name sufficient to inform a purchaser of the food's true nature and distinguish it from other products with which it could be confused. This may be a reserved description (see below under jam, jelly, and marmalade).
- If the food contains any of the specified allergens (see above) this will need to be declared to consumers.
- If any ingredient that has been irradiated or genetically modified this must be declared. This information can be provided on a label or notice near to where the food is chosen. In relation to allergens, the information may be given orally. Where allergens are to be declared orally, there must be a label or notice to indicate that the details can be obtained from a member of staff.

### **JAM, JELLY, AND MARMALADE**

Compositional standards and additional labelling for some foods must meet minimum standards for their composition and require extra information.

Jam, jelly, and marmalade – the Jam and Similar Product Regulations 2003 give reserved descriptions which form the 'name of the food' for jam, jelly and marmalade and set minimum amounts of fruit.

You should contact the [trading standards office](#) for more details. The amount of fruit and sugar must be declared on the label where the food is pre-packed – 'prepared with Xg of fruit per 100g' and 'total sugar content Yg per 100g'. The total sugar is the sugar from the fruit and that added in cooking. You may need a refractometer to check this. Any residual sulphur dioxide preservative above 10mg/kg must also be declared in the ingredients list. A jam with less than 65% sugar will require storage in the fridge after opening.

### **OLIVE OILS**

There are marketing standards with additional labelling requirements for the different types of olive oils. You should contact your local trading standards office for more details.

### **WEIGHT AND VOLUME MARKING**

A metric weight or volume must be indicated on each pack, and this must be in the same field of vision as the name of the food.

The quantity shown must be the net weight i.e., the weight of the food without the weight of the container, lid and label. An imperial equivalent can also be given but the metric indication

must be more prominent and for most packs must be at least 4mm high.

Jam, jelly, and marmalade are no longer required to be packed in prescribed quantities.

Containers can be filled either to the minimum system where each pack is at or above the declared weight, or to the average weight. For minimum weight each container must be individually weighed on a scale that has been tested and approved for trade use. If you wish to pack for average weight you will need to contact the [trading standards office](#) for further information.

**For further information please contact:**

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