

# UNDERSTANDING FOOD & FOOD LABELLING TERMS

## A

**Acidity:** The acidity is the number of free hydrogen ions available. In food acids cause a sour taste. Basically the more sour the food the greater the acidity. Acidity is measured by pH. The lower the pH, the higher the acidity.

**Additives:** Additives are chemicals which are added to food to perform many functions, including: extension of shelf life (preservatives); improving taste (flavourings), or appearance (colourings), or texture.

The Legal definition of additives in the Food labelling regulations is – Additives are any substance not normally consumed as a food in itself and not normally used as characteristic ingredient of food, whether or not it has nutritive value, the intentional addition of which to a food for a technological purpose in the manufacture, processing, preparation, treatment, packaging, transport or storage of such food results, or may be reasonably expected to result, in it or its by-products becoming directly or indirectly a component of such foods. Additives are often only safe at low concentrations so the amount of additive added should be carefully controlled.

**Aerobes:** Aerobes are life forms which need to use the oxygen in air in order to live. All animals, including us, are aerobes. Most yeasts and moulds are aerobes. Bacteria are basically divided between those which need oxygen (aerobes) and those which can survive without oxygen (anaerobes).

**Aluminium:** Aluminium is a metal used in the manufacture of some types of pots and pans. However aluminium is attacked by acids and aluminium can migrate into the food if the pans are uncoated. Aluminium can act as an accumulative poison and has been linked with types of dementia.

**Anaerobes:** Anaerobes are life forms which can survive without the oxygen in air. Some anaerobes are actually killed by oxygen. Green plants can live anaerobically. As far as food hygiene is concerned the most important anaerobes are the Clostridium group of bacteria, including *Clos. perfringens* and *Clos. botulinum*. Clostridium bacteria can only grow in the absence of oxygen. *Clos.botulinum* is a very dangerous anaerobe which can cause serious illness and death. Canning and other manufacturing processes where this could grow are designed to ensure it is not present (see also botulinum cook and botulism)

**Antibiotics:** Antibiotics are chemicals produced by microbes (normally moulds but sometimes bacteria) which kill or prevent the growth of other microbes (normally bacteria). The most frequently used antibiotic used to treat disease in man is penicillin. Antibiotics are also used to prevent and cure disease in farm animals and if care is not taken these antibiotics can be present in our food.

**Antimony:** Antimony is a metal which is found in enamel and can migrate into food from chipped enamel, especially when used to store acidic food. Antimony can accumulate in the body and cause damage to the nervous system.

**Antioxidants:** Any food made using fats or oils - from meat pies to mayonnaise - is likely to contain antioxidants.

These make foods last longer by helping to stop the fats, oils and certain vitamins from combining with oxygen in the air - this is what makes food taste 'off' - become rancid and lose colour.

**Aseptic conditions:** Aseptic conditions means, an environment free of microbes. Aseptic conditions are needed when packing sterilised food into sterilised containers. Aseptic conditions are usually created in a small localised area by sterilising the air and enclosing surfaces either with steam or chemicals.

**Authentic:** The term "authentic" has a different meaning to "traditional". It may imply either that a product has remained unchanged through the passage of time, or that it actually originates from the area implied by its name (e.g. "authentic Lancashire Hot Pot") when the generic description of the product has passed into wider usage.

"Home-made" is a term defined very simply and specifically in dictionaries:

- made or prepared in the home; of domestic manufacture;
- made at home using traditional methods rather than by a manufacturer;
- made by oneself;
- crudely or simply made.

## B

**Bacillus cereus:** Bacillus cereus (from Latin, meaning waxy rod) is a spore forming bacteria which produces a toxin when growing in food. This toxin, when eaten with the food, causes inflammation of the stomach, hence stomach pains and vomiting. Cooked rice is the food most commonly associated with this type of food poisoning.

**Bacteria:** Bacteria are a large group of single celled microscopic life forms whose genetic material (D.N.A.) is not bound within a membrane or stabilised by special proteins (known as histones).

**Bactericide:** A bactericide is any chemical which kills bacteria. The bactericidal power of a disinfectant means its effectiveness at killing bacteria. The suffix cide is derived from the Greek meaning killer.

**Bar code:** The technical definition for a barcode is a machine readable form of information on a scannable, visual surface. The information is then transmitted into a database where it can be logged and tracked. Barcodes are very useful for maintaining accurate information about inventory, pricing and other important business related data.

**Barrier creams:** Barrier creams are hand creams used to protect hands from drying or cracking. Rough cracked skin harbour more bacteria than smooth skin, so food grade (*hypo allergenic and unscented*) barrier creams should be used by food handlers.

**Best Before:** 'Best Before' dates appear on a wide range of frozen, dried, tinned and other foods. A 'Best Before' date is applied to food in which the microbes are either dormant or dead, hence spoilage is normally due to slow chemical changes occurring within the food. Only low risk food, as far as food poisoning is concerned, should have a 'Best Before' date and all other food should have a 'Use By' date. Often 'Best Before' dated food has to be stored under appropriate conditions to last until its 'Best Before' date. e.g. most frozen food needs to be stored at  $-18^{\circ}\text{C}$  and dried food should be stored in a cool dry place.

**Biological contamination:** Biological contamination is any matter of plant or animal nature, which when added to food matter makes it unfit to eat. The most common type of biological contamination is human hair but other types include animal hair, bits of insects, rodent or fly droppings and toadstools.

**Blanching:** Blanching is the immersion of fruit and vegetables in boiling water or steam in order to destroy enzymes which will otherwise cause undesirable chemical changes in the product. Blanching is derived from the French for white, as fruit and vegetables lose colour during the blanching process.

**Botulinum cook:** The botulinum cook is the amount of heat processing required to reduce the chance of survival of a botulinum spore to 1 in 1,000,000,000,000. Low acid food (above pH 4.5) sealed in an air tight container, such as a can, stored above  $3^{\circ}\text{C}$ , requires a botulinum cook. Normally this consists of heating the food to a core temperature of at least  $121^{\circ}\text{C}$  for 3 minutes.

**Botulism:** Botulism is a severe type of food poisoning caused by eating food contaminated by the toxin produced by *Clostridium botulinum*. The toxin attacks the nervous system and usually results in death within 2 to 8 days if the patient is untreated. The foods at greatest risk are canned, bottled or vacuum packed food where the pH is above 4.5.

**Bound water:** Bound water is water which is unavailable for microbial growth. e.g. sugar binds water to it, so microbes cannot grow on properly manufactured golden syrup as all the water is bound.

**Bulking Agents:** A bulking agent is a substance which contributes to the volume of a food without contributing significantly to its available energy value.

## C

**C.I.P.:** C.I.P. is short for 'Cleaning In Place' and is an automatic cleaning system used for cleaning industrial equipment and machines without having to dismantle the equipment. The C.I.P. is normally controlled by a computer or microprocessor and the program should not be short cutted or altered without expert advice.

**Calcium:** Calcium is a very important mineral essential for strong bones and teeth. Calcium is found in dairy products, white bread, broccoli, sunflower seeds, sardines and tofu.

**Calorie:** Technically a calorie indicates how much energy it takes to change the temperature of 1 gram of water by 1 degree Celsius. A calorie is a measure of how much energy the nutrients protein, carbohydrate, and fat can supply your body. When you eat food, your body uses the food as fuel, burning it to produce energy, or calories. Every person's body needs energy to function.

Manufacturers may use statements such as:

- **Calorie Free or No Calories:** Contains fewer than 5 calories per serving.
- **Low Calorie:** Contains 40 or fewer calories per serving

**Canning:** Canning is the process of storing food in tin plated, lacquered steel containers which have been sterilised by heat treatment. The amount of heat needed for sterilisation depends on the pH of the food and the size of the can.

**Carbohydrates:** Carbohydrates are one of three macronutrients with fats and protein being the other two. They are made from a combination of carbon, hydrogen and oxygen hence the name 'carbo' (meaning carbon) 'hydrate' (meaning water which is made from hydrogen and oxygen). Carbohydrates are your body's primary energy source.

**Carbonated:** Carbonation refers to the dissolving of carbon dioxide in an aqueous solution. The process usually involves high pressures of carbon dioxide. Upon lowering of this pressure, the carbon dioxide is released from the solution as bubbles. This effect is observed in carbonated beverages

**Carbonised food:** Carbonised food is food which is burnt in frying, roasting or baking. In industry carbonised food can accumulate on heat exchangers. These burnt food stains cling to surfaces and are difficult to clean.

**Central Kitchen:** A central kitchen is where the food is prepared, cooked, portioned then either chilled or frozen in a Cook-chill or Cook-freeze operation. A central kitchen normally also has a chilled storage area for Cook-chill or Cook-freeze food.

**Certified humane:** The 'Certified Humane Raised and Handled' program is a certification and labelling program that is the only animal welfare label requiring the humane treatment of farm animals from birth through slaughter. The goal of the program is to improve the lives of farm animals by driving consumer demand for kinder and more responsible farm animal practices. When you see the Certified Humane Raised and Handled label on a product you can be assured that the food products have come from facilities that meet precise, objective standards for farm animal treatment.

**Chemical contamination:** Chemical contamination is when food fit for human consumption is made unfit for human consumption by the addition or migration of harmful chemicals into the food.

**Chemical migration:** Chemical migration is when chemicals move from the food container into the food causing chemical contamination. Examples are antimony from cheap enamel saucepans and poisonous chemicals from non-food safe plastics.

**Chilling:** This is the process whereby food is cooled to a temperature between 0 and 5°C then stored at this temperature. Chilling takes high risk food out of the danger zone and protects food from food poisoning and microbial spoilage by slowing microbial growth.

**Chlorination:** Chlorination is the addition of chlorine gas to water to prevent the growth of microbes in the water. In canning the amount of chlorine in the cooling water needs to be checked to ensure that the concentration of chlorine is high enough to disinfect the water, but not too high, otherwise the chlorine might cause chemical contamination of the food or corrode the can.

**Cholesterol Free:** Contains fewer than 2 mg of cholesterol and 2 grams or less of saturated fat per serving.

**Clean As You Go:** Clean As You Go makes it the responsibility of all food handlers to keep their work area clean and wipe up spillages as soon as they occur, before they become engrained.

**Cleaning:** This is the removal of dirt, dust and food debris from an area or piece of equipment. Cleaning might remove microbes but does not kill them. Normally a cleaning sequence is as follows: Pre rinse (or pre clean); Main clean (with detergent); Rinse; Disinfection (or sterilisation); Final rinse (if a chemical disinfectant was used); drying.

**Cleaning schedule:** A cleaning schedule is a plan to ensure that all surfaces and all equipment in food areas are cleaned in a systematic way. The frequency of cleaning and the cleaning procedure depend upon the type of dirt and the speed of accumulation of the dirt.

**Clostridium:** Clostridium is derived from the Greek for spindle, as this group of bacteria look like spindles when forming spores. Clostridium bacteria can only grow in the absence of air. Two species of Clostridium can cause food poisoning; *Clos. perfringens* and *Clos. botulinum*.

**Clostridium botulinum:** Clostridium botulinum can grow in food where oxygen is absent, the pH is above 4.5, and the temperature is above 3°C. When *Clos. botulinum* grows in food it releases a toxin. If eaten this toxin causes the disease botulism.

**Clostridium perfringens:** Clostridium perfringens is an anaerobic, spore forming rod which produces a toxin during spore formation. This toxin causes a form of food poisoning, which is normally mild but it may be more severe in the very young, elderly or infirmed. The foods most commonly associated with this type of food poisoning are large pots of stews and curries or large joints of meat where the heat penetration is poor or where the cooling time is too long.

**Cockroaches:** Cockroaches are beetle like insects, which are usually found in warm areas where food is stored, although one type of cockroach prefers cooler, drier places such as storerooms or basements. All cockroaches can contaminate food and spread food poisoning microbes including Salmonella.

**Cold spots:** Cold spots are localised areas which receive insufficient microwave energy during microwave cooking. Thus the temperature in cold spots is often too low to kill microbes. Cold spots can be reduced by; turning the food; stirring the food; allowing standing time during and after cooking and not overloading the microwave oven.

**Coliform test:** Coliforms are a group of bacteria which are present in water and the guts of people and animals. Some coliforms can cause disease. In the coliform test, liquid (e.g. water or milk) is added to a purple broth in a test tube, with a small inverted tube at the bottom of the test tube. Coliforms produce acid and gas. The acid causes the broth to change colour from purple to yellow and the gas causes the small inverted tube to rise up the test tube (*see also e-coli*)

**Colours:** These are sometimes used to replace the natural colour lost during food processing or storage, or to make products a consistent colour. Colours commonly found include caramel (E150a), which is used in products such as gravy and soft drinks; and curcumin (E100), a yellow colour extracted from turmeric roots.

**Contamination:** Contamination is the addition of a substance (be it microbial, chemical, physical or biological in nature) to a food fit for human consumption which then makes that food unfit for human consumption. Eating contaminated food may cause food poisoning in the case of microbial, chemical or biological contamination or internal injury in the case of physical contamination.

**Cook-chill:** In Cook-chill, food is prepared, cooked, portioned then chilled to 3°C in a central kitchen. The food is taken to a feeder kitchen where it is reheated prior to being eaten. Cook-chill is used in large scale catering operations such as hospital food or school dinners.

**Cook-freeze:** In Cook-freeze the food is prepared then cooked in a central kitchen, portioned then frozen to -20°C. The food can be stored for up to eight weeks, before it is reheated in a feeder kitchen before being eaten.

**Cooking:** This is the application of heat to food in order to kill all active microbes. Cooking does not always kill spores or break down toxins. Hence the safest option is to cook fresh food and eat the food hot, immediately after it has been cooked. The safest cooking method is a short time, high temperature one, which quickly takes the food through the danger zone.

**Country, Farm etc:** The use of terms like “country”, “farm” etc or similar visual depictions of typical rural scenes may mislead if the food to which they are applied has not been produced on what the average consumer would understand to be a farm. 86. “Farm House” or “farmhouse” can only be defined as a house on a farm, and more specifically as the main dwelling of the farmer himself.

**Cross contamination:** Cross contamination is when microbes are moved from a source rich in microbes to a food (normally a high risk food) which initially was virtually free of microbes. The source rich in microbes can be raw food, refuse or soil from vegetables and the vehicle for moving the microbes can be handler's hands, pests, equipment (knives, tongs etc.) or surfaces.

**Curd:** Curd is basically a mixture of milk proteins which go from the liquid state to the solid state as the pH falls, when making cheese.

## D

**Daily values:** The Percent Daily Values on the Nutritional Facts label is a guide to the nutrients in one serving of food. For example, if the label lists 15 percent for calcium, it means that one serving provides 15 percent of the calcium you need each day.

**Danger zone:** The danger zone is the temperature range in which food (especially high risk food) is at the greatest risk from microbial attack. Food containing active (or potentially active) microbes should be stored or held within the danger zone for the shortest possible time. The danger zone is between 5°C and 63°C.

**Detergent:** A detergent is a chemical (or a mixture of chemicals) which can spread over a surface (good at wetting), causing the dirt to go into suspension. Detergents do not kill microbes but can wash away many microbes with the food debris.

**Disinfection:** Disinfection is the process whereby microbes are killed until their number is reduced to a safe level. Disinfection can approximately mean killing all active (vegetative) microbes but not the spores. Using hot water above 82°C for one minute is the most common disinfectant but a range of chemicals can be used. Equipment and surfaces need to be cleaned before they can be disinfected.

**Disinfection (milk):** When milk is disinfected it is heated to 100°C for about 10 seconds. Disinfected milk is not sterile as spores can survive the disinfection process but disinfected milk is more stable than pasteurised milk. Disinfected milk is mainly used for milk products such as dried milk or yoghurt.

**Display until:** Date marks such as 'display until' or 'sell by' often appear near or next to the 'best before' or 'use by' date. They are used by some shops to help with stock control and are instructions for shop staff, not shoppers.

**Dried food:** Dried food is food in which part of the free water has been removed to protect that food from microbial attack. Dried food should be stored in a dry environment as many dried foods can take in moisture from their environment, thus increasing their water content, so making them vulnerable to microbial attack. Once water has been added to many dried foods they once again become high risk foods.

**Drip:** Drip is liquid released during the thawing of meat (including poultry) and fish. Drip might be contaminated with microbes so cooked or ready to eat food stored in the fridge should be protected against drip.

## E

**E numbers:** An 'E' number is used as a 'short form' definition for food additives found on food labels. The 'E' prefix indicates the additive is approved for the use in the European Union and has been tested for safety.

### **Escherichia-coli (commonly known as e-coli):**

e-coli are part of the normal flora of the gut of warm blooded organisms. E-coli can survive outside the body and are used as an indicator organism in environmental samples for faecal contamination. Whilst most are harmless serious food poisoning outbreaks have been linked to some strains of verocytotoxin producing e-coli (VTEC) belonging to serotype O157 which can cause haemorrhagic colitis and haemolytic uraemic syndrome (HUS), two potentially life-threatening conditions.

**Economy:** see- Value

**Emulsifiers:** Emulsifiers such as Lecithins (E322), help mix ingredients together that would normally separate, such as oil and water. Emulsifiers and stabilisers also give foods a consistent texture. They are used in foods such as low-fat spreads and other sweet and savoury foods.

**Energy:** This is the amount of energy that the food will give you when you eat it. It is measured either in calories (kcal) or joules (kJ)

Manufacturers use statements on products such as:

- **Low energy** – A claim that a food is low in energy may only be made where the product does not contain more than 40 kcal (170 kJ) /100 g for solids or more than 20 kcal (80 kJ)/100 ml for liquids. For table-top sweeteners the limit of 4 kcal (17 kJ)/portion, with equivalent sweetening properties to 6 g of sucrose (approx 1 teaspoon of sucrose), applies.
- **Energy-reduced** – A claim that a food is energy-reduced may only be made where the energy value is reduced by at least 30%, with an indication of the characteristic(s) which make(s) the food reduced in its total energy value.
- **Energy-free** - A claim that a food is energy-free may only be made where the product does not contain more than 4 kcal (17 kJ)/100ml. For table-top sweeteners the limit of 0,4 kcal (1,7 kJ)/portion, with equivalent sweetening properties to 6 g of sucrose (approx 1 teaspoon of sucrose), applies.

**Environmental Health Officer (E.H.O.):** E.H.O's are specialist practitioners appointed by local authorities to enforce the food laws. They can also be consulted on any matter concerning food hygiene. E.H.O's also have other responsibilities including environmental control. They also work for private sector companies.

**Exhaustion:** Exhaustion is the process whereby air is removed from cans before they are sealed. Removing the air reduces the stress on the metal during heat processing and cooling as well as reducing the risk from undesirable chemical changes inside the can such as the vitamin loss.

**Exposed food:** Exposed (or open) food is food in which the retailer has to do some work on, besides storing and selling it. Exposed food is more likely to become contaminated, whilst in the retailer's charge, than sealed food, so retailers who deal with exposed food need to have a greater knowledge of food hygiene.

**Extra lean:** less than 5 g fat, less than 2 g saturated fat, and less than 95 mg cholesterol per serving and per 100 g.

# F

**Fairtrade:** The Fairtrade mark is an independent consumer label which appears on products as an independent guarantee that disadvantaged producers in the developing world are getting a better deal.

**Fat:** Fat is a good source of energy and it provides essential fatty acids that the body can't make itself.

Types of Fats:

- **Hydrogenated fats:** Hydrogenated fats are the results of a process that hardens liquid vegetable oils. Margarine is an example of a hydrogenated fat, so are chocolate, sweets, ice cream and baked goods. In the body hydrogenated fats change into trans fatty acids which are shown to cause diabetes, heart disease and even cancer. Trans fatty acids also cause weight gain as they interfere with the metabolism and breakdown of essential fatty acids.
- **Saturated fat:** can raise our blood cholesterol over time, and so increase the risk of heart disease. It is the fat that most of us need to cut down on and is usually found in the following foods: fatty cuts of meat, meat products including sausages and pies, butter, ghee, lard, cheese, especially hard cheese, cream, soured cream, ice cream, some savoury snacks and some sweets, chocolate biscuits, cakes and pastries.
- **Trans Fats:** Trans fats occur naturally in small amounts in animal fats, but are also produced during the manufacturing process called hydrogenation. The process changes the chemical structure of the fat which alters the way it is metabolised in the body. Trans fats may be monounsaturated or polyunsaturated but never saturated.
- **Unsaturated fat:** is found in avocados, nuts and seeds, oily fish such as salmon, fresh tuna and mackerel, and sunflower and olive oils. These fats can help reduce blood cholesterol levels and provide us with the essential fatty acids we need. Both saturated fat and unsaturated fat contain the same amount of calories, but we should replace some of the foods we eat that are high in saturated fat with foods that are high in unsaturated fat instead, as part of a healthy diet
- **Monounsaturated Fat:** Monounsaturated fats are liquid at room temperature and solid when chilled. Monounsaturated fats are mostly found in olive, canola and sesame oils, avocados, peanut butter and nuts.
- **Polyunsaturated Fat:** Polyunsaturated fats are liquid at room temperature and when chilled. These liquids include vegetable oils such as soya bean and corn oils. Salmon, mackerel, trout and herring also contain polyunsaturated fats as do walnuts and sunflower seeds. It is better to eat foods rich in monounsaturates and polyunsaturates, than foods rich in saturates.

Some manufacturers use statements on products such as:

- **Low Fat** - A claim that a food is low in fat, may only be made where the product contains no more than 3 g of fat per 100 g for solids or, 1,5 g of fat per 100 ml for liquids.

- **Fat Free** - A claim that food is fat-free may only be made where the product contains no more than 0.5 g of fat per 100 g or 100 ml. However, claims expressed as 'X% fat-free' shall be prohibited.
- **Low saturated fat** – A claim that a food is low in saturated fat, may only be made if the sum of saturated fatty acids and trans-fatty acids in the product does not exceed 0,1 g per 100 g for solids or 0,75 g /100 ml for liquids and in either case the sum of the saturated fatty acids and trans fatty acids must not provide more than 10% of energy.
- **Saturated fat free** – A claim that a food does not contain saturated fat, may only be made where the sum of saturated fat and trans-fatty acids does not exceed 0,1 g of saturated fat per 100 g or 100 ml.
- **High unsaturated fat** – A claim that a food is high in unsaturated fat, may only be made where at least 70% of the fatty acids present in the product derive from unsaturated fat under the condition that saturated fat provides more than 20% of energy of the product.

**Feeder kitchen:** A feeder kitchen is a place where Cook-chill or Cook-freeze food is reheated before it is eaten. The feeder kitchen should be next to the dining area, or in a hospital on the ward, as the food should be eaten within 15 minutes, after being reheated.

**Fibre:** Fibre is only found in foods that come from plants. There are two types of fibre: insoluble and soluble.

- **Insoluble Fibre** - This is the fibre that the body can't digest and so it passes through the gut helping other food and waste products move through the gut more easily. Wholegrain bread, brown rice, wholegrain breakfast cereals and fruit and vegetables all contain this type of fibre.
- **Soluble fibre** - This fibre can be partially digested. Good sources of soluble fibre are oats and pulses such as beans and lentils.

Some manufacturers use statements on products such as:

- **Source of fibre** – A claim that a food is a source of fibre may only be made where the product contains at least 3 g of fibre per 100 g or at least 1, 5 g of fibre per 100 kcal.
- **High fibre** - A claim that a food is high fibre, may only be made where the product contains at least 6 g of fibre per 100 g or at least 3 g of fibre per 100 kcal.
- **Good Source of Fibre** - Contains 2.5 to 4.9 grams fibre per serving
- **More Fibre or added Fibre** - Contains at least 2.5 grams more fibre per serving than the reference food.

**Flies:** Flies are a large group of two winged insects, which include common disease spreading pests such as houseflies and blowflies. These flies can cause food poisoning by contaminating uncovered food.

**Flavour Enhancers:** Flavour enhancers are used to bring out the flavour in a wide range of savoury and sweet foods without adding a flavour of their own.

**Flavourings:** Flavourings, in contrast, are added to a wide range of foods, usually in very small amounts, to give a particular taste or smell.

Flavourings don't have E numbers because they are controlled by different laws to other food additives.

**Food:** Food consists of a group of chemicals which are essential for life. These chemicals include proteins, fats, carbohydrates, vitamins and minerals. Most food is from plant or animal origin. Food should be appetising, which means pleasing in appearance, taste, smell and texture (or mouth feel). However other life forms are also interested in our food. These life forms include microbes (bacteria and fungi), pests (insects, rodents and pigeons) and even pets (cats and dogs). Hence food needs to be protected from microbes and pests.

**Food borne disease:** A food borne disease is a disease in which the food acts as a carrier for a microbe, which can only grow and produce toxins, hence disease, after the food has been eaten. Food poisoning microbes grow in the food whilst food borne microbes do not grow in the food.

**Food debris:** Food debris are bits of food which are formed by flaking or falling off the main body of food, e.g bread crumbs from a loaf of bread.

**Food handler:** Food handlers are people involved in the manufacturing, processing, distribution and retailing of food as well as catering. Food handlers may be in direct contact with food such as food production and catering staff or indirectly such as designers of food equipment or food production areas.

**Food poisoning:** Food poisoning is any illness produced by eating food which is contaminated by toxins (or poisons) from microbial, chemical or biological origin. The vast majority of cases of food poisoning in this country are caused by microbes (especially bacteria).

**Food Premises Registraton:** Under European law (Regulation EC 852/2004 Article 6(2)) it is a legal requirement that anyone running a business where food is offered for sale must register with their local authority

**Food Safety Management System [FSMS]:** [FSMS]. Under European law (Regulation EC 852/2004 Article 5) it is a legal requirement for food businesses to document how they produce food safely.

**Food Standards Agency:** The Food Standards Agency is a non-ministerial government department of the Government of the United Kingdom. It is responsible for protecting public health in relation to food throughout the United Kingdom and is led by an appointed board that is intended to act in the public interest. The FSA provides advice and information to the public and Government on food safety from farm to fork, nutrition and diet. It also protects consumers through effective food enforcement and monitoring

**Foreign bodies:** This is a technical term referring to any extraneous matter, whether of a physical, chemical or biological nature found in food. Examples of foreign bodies are particles of paint, cleaning fluid and human hair. Usually foreign bodies render the food unfit for human consumption. However foreign bodies also include particles of the wrong food such as a butter bean found in a tin of peas. Legally foreign bodies break the Food Safety Act (1990) (*Warning UK only*) as foreign bodies are not of the substance expected.

**Fortified:** Any food that has been supplemented with essential nutrients either in quantities that are greater than those present normally, or which are not present in the fortified food. The supplementation of cereals with iron and vitamins is an example of fortified food. Fortified food includes also enriched food to which various nutrients have been added to compensate for those essential nutrients removed by refinement or processing.

**Free range:** The term "free-range" is typically used to refer to any animal that is permitted to roam free through fields, rather than being confined to a cage or enclosure. Free-range chickens are chickens that have access to grass for at least some of the day, and free-range eggs are the eggs that free-range chickens produce.

**Free water:** The free water is the part of the water content of food which is available to microbes.

**Freezing:** Freezing is the process where by the water component of the food is changed from the liquid phase to the solid phase (ice) in order to protect the food from microbes. To obtain high quality, the freezing should take place as quickly as possible. In frozen food the microbes are dormant rather than dead.

**Fresh:** The description "fresh" can be helpful to consumers where it differentiates produce that is sold within a short time after production or harvesting. However, modern distribution and storage methods can significantly increase the time period before there is loss of quality for a product, and it has become increasingly difficult to decide when the term "fresh" is being used legitimately.

**Fungi:** Fungi are life forms in which the genetic material is bound by a membrane (unlike bacteria), but do not produce their own food (unlike plants) and are unable to move on their own (unlike animals). Fungi vary in size from microscopic yeast and some moulds, to visible moulds, to large mushrooms and toadstools.

## G

**Gelling agents:** The most common gelling agent is pectin (E440), which is used to make jam. Gelling agents are used to change the consistency of food.

**Genetically Modified:** Genetically modified food products are plants that have had their genetic characteristics altered. Scientists change the plants' characteristics by putting new genetic material into them, genes for example from the bacteria which can withstand pesticides.

(Animals can also be genetically modified. Scientists are researching the genetic modification of fish, cows and pigs amongst others.)

**Gluten :** Gluten is a protein found in wheat and some other cereals. If you have gluten intolerance (also known as celiac disease) you need to know if the foods you buy have gluten in them. So what manufacturers put on their labels is very important.

Some manufacturers use statements on products specially marketed for people with celiac disease such as:

- **Gluten free** – Only foods which contain less than 20ppm of gluten can be labelled 'gluten-free'. This will include naturally gluten-free foods, specialist substitute products which may contain Codex wheat starch and pure, uncontaminated oats.
- **Very low gluten** (mainly prescribable products) – Products which contain between 21 and 100ppm gluten can be labelled 'very low gluten'. This will include specialist substitute products which contain Codex wheat starch.
- **Suitable for coeliacs**

These terms are now covered by legislation for the labelling of gluten free foods which were published in January 2009. Manufacturers have until January 2012 to comply with this legislation.

**Glycaemic Index:** The Glycaemic Index is a dietary index that is used to rank carbohydrate-based foods. The index forecasts the rate at which the food we eat will increase blood sugar levels. Low GI foods include brown rice, pulses, orange juice and porridge.

## H

**H.A.C.C.P.:** H.A.C.C.P. is an abbreviation for Hazard Analysis Critical Control Points. In this system the places where the product is at greatest risk are known as Critical Control Points. *Under European legislation* these points need to be identified, monitored and controlled.

**Hand-made:** A product endorsed as being “hand-made” should be significantly made by hand rather than just one element of the process being carried out in that way. Terms such as “hand assembled”, “hand carved”, or “hand decorated / finished” may be appropriate alternatives. If “hand crafted” is used then it should be clear as to which part of the process this refers to if it is not entirely produced by hand. It would not however be against public expectation for a “hand-made” product to be produced within an industrial setting.

**Hazard analysis:** Hazard analysis means assessing the risks in a catering or manufacturing process and predicting where in the process the risks from microbial, physical and chemical contamination are greatest.

**Health claims:** Lots of the foods we buy have statements on the label about their beneficial effects on the body such as, 'helps maintain a healthy heart', or 'helps aid digestion'. These are examples of health claims.

Previously, the rules on claims were very general, making it difficult for people to know what certain terms meant. Now there are specific rules to help protect consumers from misleading claims, which means that any claims made about the nutritional and health benefits of a food will only be allowed if they are based on science.

General claims about benefits to overall good health, such as 'healthy' or 'good for you', will be only allowed to be used if accompanied by an appropriate and approved claim. This means that more general claims must be backed up by an explanation as to why the food is 'healthy' or what makes it a 'superfood'.

Labels are not allowed to claim that food can treat, prevent or cure any disease or medical condition. These sorts of claims can only be made for licensed medicines.

**Heat exchanger:** A heat exchanger is a piece of equipment in which liquids of different temperature are pumped across either side of a metal plate (or sometimes metal tubes are used with one liquid in the inside and another on the outside of the tube). Heat then flows across the plate (or tube) from the liquid of higher temperature to the liquid of lower temperature.

**Heat processing:** Heat processing is the application of heat to food in order to kill all or most of the microbes thus making the food safe to eat. Heat processing might also improve the flavour and texture of food. Cooking is a form of heat processing.

**High acid food:** High acid food is food with a pH below 4.5 and does not pose a threat as far as bacterial food poisoning is concerned. However there have been cases of food poisoning caused by pathogenic moulds growing in high acid food. Microbial spoilage of high acid food is usually by moulds and yeasts. Examples of high acid foods are rhubarb and citrus fruits (oranges and lemons).

**High risk food:** High risk foods are foods at the greatest risk from microbial contamination, as they readily support microbial growth when kept within the danger zone. Hence high risk food should be stored either below 5°C or above 65°C. Unless sterilised then aseptically packed high risk food should have a 'Use By' date.

**Home-made:** Consumers understand the term “home-made” to mean food prepared in a domestic kitchen rather than in a factory or a manufacturer’s kitchen. The use of the term, if unqualified, should accordingly be restricted to the broad criteria above.

**Humidity:** Humidity is the amount of moisture or water vapour in the air. Dried food can take moisture from the air so should be stored under low humidity. However raw meat, fruit and vegetables should be stored under high humidity to prevent them drying out.

**Hygiene:** Hygiene is derived from the Greek goddess for health (Hygeia). The purpose of food hygiene is to ensure that the food we eat is healthy and free from contamination. Food hygiene is about protecting food from microbes, pests, physical and chemical contamination. The most important factors are temperature, time, cleanliness and keeping the food covered.

**Improvement notice:** A hygiene improvement notice (Warning UK only) is a notice issued by a local authority (via an E.H.O or qualified food safety officer) to a person in charge of a food business (the Food Business Operator) stating how the business is breaking the food laws and what actions must be taken in order to comply with the law. An improvement notice must give a minimum of 21 days for compliance and is legally binding. Businesses can be prosecuted for not complying with a notice.

**Ingrained dirt:** Ingrained dirt refers to liquid which has dried onto a surface making it difficult to clean. Often ingrained dirt attracts other dirt and debris by sticking to it, thus causing an accumulation of dirt which attracts microbes and pests.

**Ingredients:** Ingredients, including additives, are listed in descending order of weight at the time they were used to make the food. If flavourings are used, the label must say so.

**Insects:** Insects are a large group of animals whose bodies are divided into three sections (head, chest and abdomen) and have three pairs of legs and two pairs of wings. As far as food hygiene is concerned the most important and dangerous insects are flies and cockroaches, although other beetles play a part in spoilage of food.

**Integrated cleaning:** Integrated cleaning is incorporating cleaning into the job of all food handlers whose work involves direct contact with food. Integrated cleaning includes Clean As You Go and cleaning schedules.

**Iron:** Iron is essential for the production of haemoglobin which transports oxygen to every cell in the body. Iron is also needed to produce white blood cells which are important for your immune system. Foods rich in iron are beans, red meat, tuna, leafy vegetables and whole and enriched grains

**Irradiation:** Irradiation is the treatment of ionising radiation used to extend the shelf life of a product. If a food has been irradiated then it should be labelled as either 'irradiated' or 'treated with ionising radiation'. Foods that may have gone under this process are herbs, spices or seasonings.

## L

**Lacquer:** Lacquer is a resin coating of cans which protect the inside of the can from acids in food which would otherwise attack the metal causing it to corrode. If the can is going to be stored in poor conditions the outside of the can, can be lacquered as well, to protect the metal from corrosion.

**Lactic acid bacteria:** Lactic acid bacteria are bacteria which convert milk sugar (lactose) into lactic acid and are used in the manufacture of cheese and yoghurt.

**Lactose:** Some manufacturers use statements on products such as: **Reduced lactose or Lactose free:** Lactose is the name of the type of sugar that is found naturally in milk. Lactose intolerance is the inability to absorb lactose into the digestive system. If lactose is not absorbed properly, it ferments and this results in abdominal pain, a bloated stomach and diarrhoea.

Milk and dairy products with 'reduced lactose' on the label - There are no rules to say how much less lactose a 'reduced lactose' milk must contain. People with mild symptoms may feel better simply after reducing the amount of dairy products in their diet.

**Leaker spoilage:** Leaker spoilage is where a can is spoilt by the can sucking in a drop of cooling water, containing microbes. Leaker spoilage can be prevented by: chlorinating the cooling water; using a good quality of can; and carefully controlling the temperature and pressure changes during heat processing and cooling.

**Light/ Lite:** A claim stating that a product is 'light' or 'lite', shall follow the same conditions as those set for the term 'reduced', the claim shall also be accompanied by an indication of the characteristic(s) which make(s) the food 'light' or 'lite'

**Listeria:** Listeria (or more accurately Listeria monocytogenes) can cause a food borne disease known as listeriosis, which has 'flu' like symptoms but can cause miscarriages in pregnant ladies. Listeria can survive and grow in a wide range of temperatures from 2 to 75°C. The foods at greatest risk are soft cheeses, pates, salads and ready to eat meals such as Cook-chill foods.

**Low Cholesterol:** Contains 20 mg or less cholesterol and 2 grams or less saturated fat per serving.

**Low risk food:** Low risk foods are foods which are unlikely to cause food poisoning due to having either a high acid content (low pH; below 4.5) or a low moisture content (or strictly speaking little free water). Normally temperature control is not essential for low risk foods as they usually spoil due to chemical changes. Hence low risk foods have a 'Best Before' date.

## M

**May contain:** Some food labels state 'may contain nuts' or 'may contain seeds' this means that even though nuts or seeds aren't deliberately included in the food, the manufacturer can't be sure that the product doesn't accidentally contain small amounts of them.

**Mechanically Recovered:** Mechanically recovered meat is a product obtained by recovering residual raw meat from bones under high pressure after other boning processes have been completed. It has been made from beef, pig, sheep or chicken bones. It is known to have been used in products such as cheaper burgers, sausages and pies. It cannot legally be added to minced meat.

The presence of MRM in meat products must be listed clearly on food labels, this must include the animal from which any MRM is derived.

**Microbes:** Microbes are a large group of life forms which can only be seen with the aid of a microscope. Microbes are subdivided into bacteria, fungi (which includes moulds and yeasts) and viruses.

**Microbial contamination:** Microbial contamination is the addition of harmful microbes, either pathogens or spoilage organisms, to food fit for human consumption, making it unfit for human consumption.

**Microwaves:** Microwaves are a type of high frequency radiation which are absorbed by water molecules, causing them to vibrate and move faster, hence producing heat. This heat can be used to cook and reheat food in microwave ovens.

**Moulds:** Moulds are a type of fungi which have multi- nuclei cells and grow by branching out from an area of high mould density. Moulds are involved in the spoilage of food and some produce poisons known as mycotoxins which cause food poisoning.

## N

**Natural:** “Natural” means essentially that the product is comprised of natural ingredients, e.g. ingredients produced by nature, not the work of man or interfered with by man<sup>10</sup>. It is misleading to use the term to describe foods or ingredients that employ chemicals to change their composition or comprise the products of new technologies, including additives and flavourings that are the product of the chemical industry or extracted by chemical processes.

**Nutrient:** Nutrients are chemicals which are essential for life, which we obtain from our food. These include proteins, carbohydrates, fats, vitamins, minerals and sodium.

## O

**Omega 3, 6 & 9 groups of fatty acids:** The Omega 3, 6 and 9 groups of fatty acids all contain essential fatty acids necessary for good health. Omega fatty acids are polyunsaturated fats. They are healthier than saturated fats and have many metabolic functions. There are many benefits of omega 3 6 9 supplementation. Omega 3 and omega 6 fatty acids are essential fatty acids (EFA's). Our bodies cannot manufacture them, and we must consume them in our diets. Omega 9 fatty acids are not essential. Our bodies need omega 9 fats, but we can manufacture them from other sources.

**Organic:** All food sold as 'organic' must be produced according to European laws on organic production. These laws require food sold as 'organic' to come from growers, processors and importers who are registered and approved by organic certification bodies, which are in turn registered by the Department for Environment, Food and Rural Affairs (DEFRA) or a similar control body elsewhere in the European Union. Labels on food sold as 'organic' must indicate the organic certification body that the processor or packer is registered with. It is not always possible to make products entirely from organic ingredients. Manufacturers are permitted to use specific non-organic ingredients provided that the organic ingredients make up at least 95% of the food.

**Original:** Unlike “traditional” the term “original” does not imply, necessarily, that a product has remained unchanged for a substantial period of time. It may be applied to newer products on the market. It is used to indicate that a product was the first of its type to be placed on the market, where the original form or flavour has remained essentially unchanged through the passage of time (although this need not be a long period) and hence to differentiate it from new additions to a range. The term is commonly used to convey “plain” or “unflavoured” where other variants are offered (e.g. “original flavour crisps”) or to indicate the first variant in a series of products.

**Oxygen:** Oxygen is a gas found in air, which is essential to sustain all animal life forms and many microbes known as aerobes. However some bacteria are poisoned by oxygen so cannot live in the presence of air. These microbes are called anaerobes. Oxygen makes up about 20% of the air.

# P

**Pasteurisation:** Pasteurisation is a type of heat processing, normally applied to milk and milk products, in which sufficient heat is applied to kill all the harmful microbes. As not all spoilage microbes are killed pasteurised products have a short shelf life and have to be stored chilled.

**Pathogens:** Pathogens are microbes which cause disease. Most microbial food poisoning are caused by bacterial pathogens but some are caused by moulds.

**Personal hygiene:** Personal hygiene is critical to food safety and the behaviour that food handlers need to practise to ensure that they do not contaminate the food or cause an outbreak of food poisoning. Examples of good personal hygiene include always washing hands before preparing food with hot, soapy water, always washing hands after using the toilet and handling raw meat, wearing protective clothes, keeping hair tied back, not wearing jewellery, not drinking, eating or chewing gum when preparing food, not working for at least 48 hours if suffering from diarrhoea and vomiting, reporting of infectious disease.

**Pests:** Pests are all animals (including rodents, insects, birds and even pets like cats and dogs), which can spread or carry food poisoning microbes or by their actions spoil food.

**pH:** pH is a scale which measures, acidity / alkalinity and ranges from pH1 for strong acids, such as hydrochloric acid, to pH14 for strong alkalis, such as sodium hydroxide. Water has a pH of 7. Low acid foods have a pH above 4.5 and high acid foods have a pH below 4.5.

**Physical contamination:** Strictly speaking physical contamination should refer to the addition of extraneous matter to food not directly of biological origin such as paper, paint or glass, but legally the term refers to all contamination of a non-microbial source, including human hair, parts of insects and cleaning fluids.

**Preserving food:** Preserving food involves indirect methods of protecting food from microbes whilst processing involves direct methods such as heat treatment. Pickling in vinegar, salting and adding sugar are methods used in preserving food.

**Preservatives:** These help stop food 'go off' and mean that food can be kept safe for longer. Most food that has a long shelf-life is likely to include preservatives, unless another method of preserving has been used ' such as freezing, canning or drying. For example, to stop mould or bacteria growing, dried fruit is often treated with sulphur dioxide (E220); and bacon, ham, corned beef and other 'cured' meats are often treated with nitrite and nitrate (E249 to E252) during the curing process. More traditional preservatives such as sugar, salt and vinegar are also still used to preserve some foods.

**Processing:** This is the direct treatment of food in order to reduce the number of microbes and enzyme activity in that food, hence increasing its shelf life. Processing might also improve the flavour and texture of food. Examples of processing include heat treatment, freezing and drying.

**Product tampering:** Product tampering is when people (human pests) deliberately and often maliciously add physical or chemical (or even microbial) contaminants to food either, for blackmail, revenge or other nefarious reason. Being more intelligent than other pests, human pests are often the hardest to control and protect food from.

**Prohibition order:** A prohibition order (Warning UK only) is an order which prohibits certain premises (in whole or in part) or processes or people being involved in the food business. A prohibition order might be issued by a court after a conviction or in an emergency by an E.H.O. on behalf of a local authority. An emergency prohibition order has to be confirmed by a court within three days of issue. Where a prohibition has been served an E.H.O must give clearance for reopening/restarting process.

**Protective clothes:** Protective clothes are clothes worn by food handlers to help to protect the food from contamination. Outside clothes are unsuitable in food areas as outside clothes might contain loose fibres which could cause physical contamination as well as a large number of microbes (as in the case of outside shoes).

**Protein:** The body needs protein to grow and repair itself. Protein-rich foods include meat, fish, milk and dairy foods, such as eggs, beans lentils and nuts.

Some manufacturers use statements on products containing protein such as:

- **Source of protein** - A claim that a food is a source of protein may only be made where at least 12% of the energy value of the food is provided by protein.
- **High Protein** – A claim that a food is high in protein may only be made where at least 20% of the energy value of the food provided by protein

**Pure:** The term “pure” is mostly used on single ingredient foods (e.g. to indicate a single, named variety of rice) or to highlight the quality of ingredients of a food (e.g. “pure butter shortbread” to indicate the butter has not been blended with other fats).

## Q

**Quid:** Most pre-packed foods have to be marked with an ingredients list. In addition foods which are characterised by particular ingredients or which have ingredients particularly mentioned in their name are required to have the percentage of those ingredients shown in the ingredients list.

## R

**Reduced (name of the nutrient)** – A claim stating that the content in one or more nutrients has been reduced, may only be made where the reduction in content is at least 30% compared to a similar product, except for micronutrients, where a 10% difference in the reference values shall be acceptable, and for sodium, or the equivalent value for salt, where a 25% difference shall be acceptable.

**Reformed:** Reformed meat has the appearance of a cut, slice or joint of meat, formed by tumbling chopped meat; also finely comminuted meat and other ingredients may be added to bind the pieces together in a pre-ordained shape.

**Remedial Action Notices:** These notices are only served on food premises approved under the Regulation (EC) No.853/2004. If any of the requirements of the Hygiene regulations are being breached or inspections under Hygiene regulations are being hampered, an officer can serve a notice on the food business operator.

The Remedial Action Notice can prohibit the use of machinery or part of an establishment, impose conditions or prohibit the carrying out of certain processes or require the rate of operation to be reduced or stopped completely.

A Remedial Action Notice must be served as soon as practicable after the breach is found and specify what the breach is and what action is needed to remedy it. As soon as an officer is satisfied the remedial action has been carried out the notice must be withdrawn.

**Rennet:** Rennet is an enzyme (biological catalyst), obtained from calf's stomachs, used in the manufacture of cheese. The rennet helps to bring the proteins, which will form the curd, out of solution.

## S

**Salmonella:** Salmonella are rod shaped microbes (named after Dr. E. Salmon) which is responsible for a severe and sometimes fatal (especially in the very young, elderly and infirm) form of food poisoning, normally associated with poultry, eggs and fish. The microbe itself acts as a toxin and does not produce a spore. The main causes of Salmonella food poisoning are inadequate heat treatment (cooking) and cross contamination from raw to cooked food.

**Salt:** see - Sodium

**Sanitiser:** A sanitiser is a cleaner which contains both detergents and disinfectants. To sanitise is to reduce the number of microbes to a safe acceptable level. If the surfaces or equipment, to be cleaned, are very dirty or contain a very large number of microbes a separate detergent and disinfectant should be used.

**Sell by:** see 'display until'

**Sodium/Salt:** Some manufacturers use statements on products such as:

- **Low sodium/salt** - A claim that a food is low in sodium/salt, may only be made where the product contains no more than 0,12 g of sodium, or equivalent value for salt, per 100 g or per 100 ml. For waters, other than natural mineral waters falling within the scope of Directive 80/777/EEC, this value should not exceed 2 mg of sodium per 100ml.
- **Very low sodium/salt** – A claim that a food is very low in sodium/salt may only be made where the product contains no more than 0,04 g of sodium, or the equivalent value for salt, per 100 g or per 100 ml. This claim can not be used for natural mineral waters and other waters.
- **Sodium-free or salt-free** – A claim that a food is sodium-free or salt-free, may only be made where the product contains no more than 0,005 g of sodium, or the equivalent value for salt, per 100 g

**Spillages:** Spillages are powders or liquids which escape from their container, causing a mess on floors, walls or work or equipment surfaces. If not cleaned up immediately food spillages attract microbes and pests and liquid food spillages become engrained onto surfaces making them harder to clean.

**Spoilage:** Food spoilage is the process where by food fit for human consumption becomes unfit due to changes brought about either by microbes, pests or chemicals within the food. Microbes and pests can spoil food rapidly whilst chemical changes within food usually take a lot longer.

**Spores:** A spore is a small protective encasement which allows some bacteria and fungi to survive in harsh conditions. Whilst in the spore form the microbe is dormant and much harder to kill than when the microbe is in the active form. Fungi also use spores as part of their reproductive cycle as well as for surviving in harsh conditions.

**Stabilisers:** Stabilisers, such as locust bean gum (E410) made from carob beans, help stop these ingredients from separating again. Emulsifiers and stabilisers also give foods a consistent texture. They are used in foods such as low-fat spreads and other sweet and savoury foods.

**Staph. aureus:** Staphylococci aureus is derived from the Greek, meaning golden bunches of grapes and berries, as Staph. aureus are small spherical clumps (which look like bunches under the microscope) which are non-spore forming but produce a heat resistant toxin. The toxin is responsible for a type of food poisoning which lasts between 6 and 24 hours. Fatalities from this food poisoning are rare. The main risk of Staph, aureus food poisoning comes from poor personal hygiene, especially the mouth or nose to hand to food route.

**Starter culture:** Starter cultures are strains of Lactic acid bacteria which are added to milk, when making yoghurt or cheese, in order to increase the acidity so that some of the milk proteins come out of solution. In making some soft cheeses, strains of mould are also added to the starter culture.

**Sterilisation:** Sterilisation is the killing of all microbes to a level that the chance of survival of any microbe, both active or spore, is very low. Sterilisation is usually by heat treatment but chemicals or radiation might also be used.

**Sterilisation (milk):** Sterilisation of milk is the killing of all the microbes in milk either by retorting milk in pressure resistant glass bottles or by heat processing the milk, then filling the milk into cartons or plastic bottles under aseptic conditions. Sterilised milk does not need to be stored chilled before being opened.

**Stock rotation:** Stock rotation means using oldest stock first, to ensure that food is used within its 'Use By' or 'Best Before' date. This is to prevent stock losses and reduce the chance of pest attack.

**Sugars:** Some manufacturers use statements on products such as:

- **Sugars-free** - A claim that food is sugars-free may only be made where the product contains no more than 0,5 g of sugar per 100 g or 100 ml.
- **Low sugars** – A claim that a food is low in sugars may only be made where the product contains no more than 5 g of sugars per 100 g for solids or 2,5 g of sugars per 100 ml for liquids.
- **No added sugar** – A claim stating that sugars have not been added to a food may only be made where the product does not contain any added mono-or disaccharides or any other food used for its sweetening properties.

- **Contains naturally occurring sugars** – present in the food, the above indication should appear on the label.

**Sweeteners:** Artificial sweeteners are chemicals or natural compounds that offer the sweetness of sugar without as many calories.

## T

**Textured Vegetable Protein (TPV):** TVP is a meat substitute made from soya flour that has been processed and dried.

**Thawing:** This is the process in which ice is converted back into liquid water. Hence thawing is the reverse process to freezing. Food (except for small pieces) should be thoroughly thawed before cooking to ensure an even distribution of heat. Food should be thawed in a covered container in a cold store or fridge at a temperature less than 5°C. Food which is thawing should be kept separate from other food to prevent cross contamination by drip.

**Thermal runaway:** Thermal runaway is when the microwaves are focused, usually by round objects such as apples, causing localised burning whilst other areas receive insufficient heat. This problem can be reduced by turning the food and allowing standing time during and after cooking.

**Thermometer:** A thermometer is an instrument used for measuring temperature. The popular mercury in glass thermometer should not be used in food areas. These days probe thermometers relying on bimetallic strips are popular in the food industry. They should be calibrated against a standard thermometer in ice at 0°C and in boiling water at 100°C before use and at frequent intervals depending on the supplier's advice.

**Thickeners:** Thickeners help give body to food in the same way as adding flour thickens a sauce.

**Total count test:** The total count (or plate count) test is used to work out the total number of microbes in 1ml of milk. The legal limit is 20,000 microbes per ml of pasteurised milk. Generally the lower the total count, the better the keeping quality of the pasteurised milk.

**Toxin:** A toxin is a poison (normally protein in nature) produced by a living entity. Most cases of microbial food poisoning are due to toxins. The toxin may be present and dangerous even though all the microbes which produced it are dead.

**Traditional:** The term "traditional" is widely used to describe a product or method of preparation when newer alternatives are available on the market. It implies more than "original" or "plain".

A food product bearing the term 'traditional' should be authentic in relation to when it was first made using the original recipe and/or ingredients and/or the technique of production.

## U

**U.H.T. milk:** U.H.T. or Ultra High Temperature milk is a type of sterilised milk, in which the milk is heated to 133°C for one second. This is done either by direct injection of steam or indirectly by using heat exchangers. The milk is aseptically packed into either plastic bottles or cartons.

**Unfit food:** Unfit food is food which is unsafe to eat either because it is contaminated or because it is decomposing. Food which is passed its shelf life, i.e. 'Use By' or 'Best Before' date is deemed unfit. It is an offence (*Warning UK only*) to have unfit food on food premises unless the unfit food is clearly in a refuse container.

**Use By:** A 'Use By' date needs to be applied to all high risk and rapidly perishable food even if stored under the appropriate conditions. No food should be sold, stored or eaten beyond its 'Use By' date.

## V

**Vacuum packing:** Vacuum packing is a similar process to canning but laminated plastic or nylon pouches are used instead of tin cans. The vacuum packs can be sterilised after they have been heat sealed or the food can be sterilised then aseptically filled into vacuum packs which are then aseptically heat sealed. The pouches are usually sterilised by radiation before being aseptically filled.

**Value or economy:** Terms such as 'value' and 'economy' mean different things to different people, and currently there is no legal definition for these terms. Some people might feel they mean high quality at a low price, and others might take them to mean basic standard at a basic price.

If you want to check for yourself whether or not you are getting value for your money, you will need to read the other information given on the label to help you compare products.

**Vegan:** The term 'vegan' should not be applied to foods that are, or are made from or with the aid of animals or animal products including products from living animals.

**Vegetarian:** The terms 'vegetarian' or 'suitable for vegetarians' should not be applied to foods that are, or are made from or with the aid of products derived from animals that have died, have been slaughtered, or animals that die as a result of being eaten. This means that the food doesn't contain any meat or animal-derived additives.

**Vitamins:** Vitamins are substances found in a range of different food that we eat. There are two types of vitamins:

- **Fat soluble**, when you eat foods that contain fat-soluble vitamins, the vitamins are stored in the fat tissues in your body and in your liver. Vitamins A, D, E and K are all fat-soluble vitamins
- **Water soluble**, these vitamins are not stored in the body to the same degree. Instead, they travel through your bloodstream, and whatever your body doesn't use is expelled when you urinate.

## W

**Whey:** The whey is the part of the milk which stays in solution after the curd has been separated out, when making cheese. The whey consists mainly of water but contains some proteins, sugars, fats and salt.

**Wholesome:** Wholesome is a term used to describe food which is safe and nutritious. Sometimes the term wholesome is used to describe fresh food which is free from additives and preservatives, whilst other people use the term in contrast to junk food. However as far as the food hygienist is concerned wholesome means safe, nutritious and of high quality.

## Y

**Yeasts:** Yeasts are small unicellular fungi which reproduce by budding and spore formation. Under the microscope yeasts are a lot larger than bacteria. Yeasts are not known to cause food poisoning but they spoil liquid foods such as fruit juices, wines and beers.

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