

Legislation and Good Practice

Contents

1 Legislation

1.1 Food safety

1.2 Ingredients

1.3 Food labelling

- 1.3.1 The name of the product
- 1.3.2 Weight or volume
- 1.3.3 Ingredients
- 1.3.4 Date marking and storage
- 1.3.5 Instructions for use
- 1.3.6 Name and address
- 1.3.7 Place of origin
- 1.3.8 Nutrition information
- 1.3.9 Lot or batch mark
- 1.3.10 Bar codes
- 1.3.11 Special labelling

2 Soft drinks production

2.1 Processing

2.2 Quality control

2.3 Codes of good manufacturing practice

1 LEGISLATION

Legislation governing the manufacture of soft drinks originates in the European Union. It is then implemented through UK Acts of Parliament and Regulations. There are also codes of practice that the industry follows.

In general the legislation covering soft drinks production can be split into three areas:

- food safety
- food labelling
- soft drinks production

1.1 Food safety

Safety is a priority at every stage of the food chain from farm to fork and the ingredients used in foods and drinks available to European consumers have been thoroughly tested for their safety and use. The UK food industry is a heavily regulated industry with safety being the overriding priority. In the case

of soft drinks there are regulations covering: the types of ingredients used, such as the basic and the optional ingredients; hygiene standards; drinks packaging; labelling; storage and handling.

The Food Safety Act 1990 makes the company and workforce responsible for the products that are produced and sold. Environmental Health Officers (EHOs) ensure these standards are upheld and can apply to the court for a closure order to close premises which pose an immediate threat to health. EHOs also have powers to seize and detain foods/drinks that are not satisfactory. Some offences under the Food Safety Act attract a penalty of up to £20,000 and/or imprisonment. All food premises are required to be registered with their Local Authority under this Act, resulting in them being subject to inspection.

Soft drinks are unlikely to pose any serious health hazards (such as bacterial pathogenic food poisoning) although they can sometimes ferment during storage or deteriorate if there are faults with the packaging.

The Food Safety (General Food Hygiene)

Regulations 1995 apply generally to anyone working with food, which includes soft drinks and bottled waters, and make all employees responsible for their actions with regard to personal hygiene. This includes:

- Hygienic operation – The factory must operate hygienically and have basic hygiene standards for premises design, structure and equipment.
- Food safety controls – The factory must identify and prevent food safety risks at each stage of production of the products with controls in place and maintained.
- Personal hygiene – The regulations cover standards for personal cleanliness, personal hand washing, personal health and protective clothing.
- Training and supervision – The training and instructions given should always be appropriate to the work undertaken.

Legislation and Good Practice

In addition to the Food Safety Act, the Environmental Protection Act greatly affects factory operations and packaging practices. There are also a range of other Acts and Regulations which cover general production.

Separate regulations governing the production of bottled waters give additional requirements for food safety for these drinks.

1.2 Ingredients

Ingredients may be categorised into two main groups: food substances and additives.

Food substances are materials such as fruit, fruit juice, sugars, starches, etc.

An **Additive** is defined under the Food Labelling Regulations 1996 as:

'any substance not commonly regarded or used as food, which is added to food to improve its keeping qualities, texture, consistency, appearance, taste, odour, alkalinity or acidity, or to serve any other technological function.'

All additives have to undergo thorough testing to ensure they are safe to be used in foods. An 'E' number shows that an additive is accepted as safe throughout the European Union.

All ingredients used must be declared on the label in descending order of usage, by weight. Additionally, additives must be declared in the appropriate category name, e.g. colour, and can either be named in full or as the corresponding 'E' number or both.

The use of additives in soft drinks is controlled by UK Regulations which implement three European Directives:

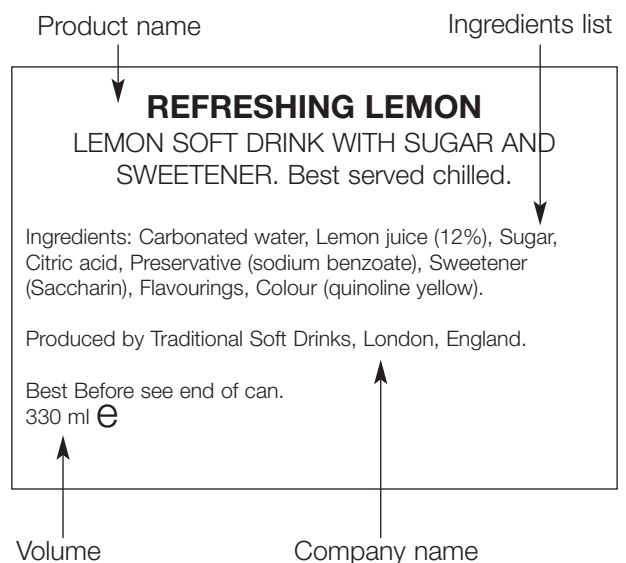
- **The Sweeteners in Food Regulations 1995** which implement the EU Directive on Sweeteners for use in Foodstuffs (94/35/EC).
- **The Colours in Food Regulations 1995** which implement the EU Directive on Colours for use in Foodstuffs (94/36/EC).
- **The Miscellaneous Food Additives Regulations 1995** which implement the EU Directive on Food Additives other than Colours and Sweeteners (more commonly called the Miscellaneous Additives Directive) (95/2/EC).

These Regulations came into force in the UK on 1 January 1996. Other laws apply to composition and labelling (see later).

1.3 Food labelling

Pre-packed foods have information for consumers on their labels. Much of the information must be provided by law, under the **Food Labelling Regulations 1996** as amended. All information should be easy to understand, e.g. in English, clearly legible and indelible, marked in a conspicuous place in such a way as to be easily visible. Information required by law must not be hidden, obscured or interrupted by any other written or pictorial matter. The following information **MUST** be on the label:

A soft drinks label



1.3.1 The name of the product

In the absence of either a 'prescribed name' or a 'customary name', the name used **MUST** effectively describe the true nature of the product, allowing it to be distinguished from other products with which it might be confused, including a description of its use where necessary. 'Prescribed names' were applied under the Soft Drinks Regulations 1964 which were revoked in 1996, e.g. squash, crush, cordial, etc. The only reserved names which remain relate to tonic water. The others are now considered to be 'customary names'.

Legislation and Good Practice

Trade, brand or fancy names may be those of a manufacturer or a retailer's own label produced on their behalf by a third party. Where these are used alone on the pack, they **MUST** be supported by an appropriate legal name appearing somewhere else, ideally close to the ingredients list. Names which are associated with a nutrient content claim, e.g. high energy, reduced sugar, sodium free, etc., should meet certain advisory requirements in order to be put on the label. An indication of the physical condition of the product may also be needed if its absence could mislead consumers. For example use of terms such as sparkling, carbonated, still, concentrated.

1.3.2 Weight or volume

All pre-packed foods are required to be marked with an indication of their net contents. Drinks are sold in a range of pack sizes ranging from 150 ml to 3 litres. Metric measurements **MUST** be used and there are minimum dimensions set for the quantity mark. The inclusion of the weight or volume helps consumers when they compare pack contents and prices between different brands.

1.3.3 Ingredients

REFRESHING DIET COLA LOW CALORIE SOFT DRINK WITH VEGETABLE EXTRACTS WITH SWEETENERS. Best served chilled.
INGREDIENTS: CARBONATED WATER, COLOUR (CARAMEL E150d), SWEETENERS (ASPARTAME, ACESULFAME-K), PHOSPHORIC ACID, FLAVOURINGS, CITRIC ACID, PRESERVATIVE (E211), CAFFEINE, CONTAINS A SOURCE OF PHENYLALANINE.
Produced by Traditional Soft Drinks, London, England.
Best Before see end of can. 330ml e

All ingredients **MUST** be listed in descending order of quantity by the weight as used in the 'mixing bowl'. In soft drinks, waters and fruit juices the predominant ingredient is water. The list starts with the greatest and ends with the least. Ingredients of the same type can be usefully grouped together if this does not mislead as to the quantities used, e.g. fruit juices. Products which are to be diluted **MAY** state their ingredients at the quantities **AFTER** dilution provided that this is made clear on the

label. Under the recent Quantitative Ingredient Declaration (QUID) rules, the percentage of each characterising ingredient in the name of the food is required to be included on the label. In the case of soft drinks this mainly relates to fruit and fruit juice content.

1.3.4 Date marking and storage

The label **MUST** say how long foods should be kept and if special conditions are needed such as chilling or freezing in relation to their storage. Following the storage instructions can prevent food from spoiling too quickly, reduce the risk of food poisoning and help to ensure that the food or drink is served as intended.



Foods and drinks which are perishable, i.e. have a shelf life of less than three months, must state a **BEST BEFORE DATE**. Other products with longer shelf lives may state a month, as **BEST BEFORE END**. Best before dates indicate that the product can be expected to retain its essential characteristics of taste, appearance, nutrient content, etc. up to the stated date provided it has been stored appropriately. If the date does not appear next to the heading it must state where else on the pack consumers can find the details, e.g. 'Best before end see base of pack'. This is called signposting.

BEST BEFORE END:
See side of cap or bottle neck for date

Legislation and Good Practice

1.3.5 Instructions for use

These are required to be included if the absence of the instructions would make the product difficult to use. In terms of drinks, this mainly applies to dilutable soft drinks where the dilution instructions are required to give a dilution measurement, such as one part concentrate to four parts water or one part concentrate to six parts water, etc. It is not required for other soft drinks as they are 'ready-to-drink' products. However, there may be serving advice included on the pack, such as 'Best served chilled'.

1.3.6 Name and address

Food and drinks MUST include the name of the manufacturer, packer or the seller established within the European Union. Where a company has more than one factory and/or a separate head office, the head office address should be given. Consumers can then contact the relevant person in the event of a problem or complaint.

1.3.7 Place of origin

The label MUST show the place of origin, where the omission of this could be misleading as to the true origin.

1.3.8 Nutrition information

Some label information is optional on some product labels. An example of this would be nutrition information. This is because nutrition labelling is currently voluntary, except when a specific nutrient content claim is being made. Around 80% of processed foods now include nutrition information. If a nutrient content claim is made certain rules apply.

Nutrition information helps consumers to find out the amount of different nutrients in the food they eat and drink. It can also help people with special dietary needs to determine foods which meet their requirements, e.g. low in sodium, high in fibre, etc.

The minimum requirement is that energy, protein, carbohydrate and fat per 100 ml is displayed if you are indicating nutrition details. However, if a claim is being made relating to carbohydrates (sugars), saturates (fat), fibre or sodium, the big four and little four must be used.

Format 1: The big four

Nutrition information per 100 ml	
Energy	1.6 kJ, 0.4 kcal
Protein	0 g
Carbohydrate	0 g
Fat	0 g

Format 2: Big four and little four

Nutrition information per 100 mls of product Use as part of a calorie controlled plan	
ENERGY	20 kJ (4.3 Kcal)
PROTEIN	Trace
CARBOHYDRATE of which sugars:	1.2 grams 1.1 grams
FAT of which saturates:	Trace Trace
FIBRE:	Trace
SODIUM:	11 milligrams

Although there are no specific rules for a number of nutrition claims, the Food Standards Agency has issued guidelines with recommended standards which must be met if certain claims are made. For example, a sugar free claim may be made if a drink contains less than 0.2 grams per 100 ml. A fibre source claim may be made if a drink contains 3 g in the quantity reasonably consumed in a day. Further information may be added to labels such as the amounts of polyunsaturates, monounsaturates, starch, cholesterol, vitamins and minerals.

Foods and drinks which have particular nutritional uses are covered by the PARNUTS Directive. The categories which may be associated with soft drinks are:

- baby drinks
- sports drinks

This Directive allows additional information to that required under nutritional labelling requirements to be included on the label.

Legislation and Good Practice

Because the information is always in one of the two formats, big four or big four and little four, it is easier for consumers to compare different labels. Information must always be given as values per 100 g or per 100 ml of food. Values for a portion or serving may be given as well.

Vitamins and minerals may also be included in either format if, as a general rule, 100 g or 100 ml of the food provides 15% of the Recommended Daily Allowance (RDA) for that nutrient in a portion or an amount reasonably consumed in a day.

1.3.9 Lot or batch mark

A lot mark is a code which is required by law to appear on the label. It helps to identify batches of food in the event that they need to be recalled by either the manufacturer, packer or producers. A date mark is sometimes used as a lot mark. Lot marks may be indicated by the letter 'L'. Lot marks generally mean nothing to the consumer but must be clearly identifiable if the need arises.

1.3.10 Bar codes

Many food labels have a bar code and number on them. This is not required by law but bar codes are a quick and easy way of identifying items especially at supermarket checkouts where the scanner can also identify other information such as the price of products. Bar codes are also used for stock control in shops and warehouses.

A bar code



1.3.11 Special labelling

As well as the general labelling requirements that apply to all food and drinks there are some specific drinks which are required to meet additional labelling requirements. These apply to the categories of Natural Mineral Water, Spring Water, Table Water, and fruit juice.

a) Natural Mineral Water

The source of a Natural Mineral Water is officially recognised and the name of the source is published within the European Union. No 'name of source' other than that which is registered may be used. The brand name, trade name, or fancy name must include either the name of the source or the place.

The composition of the water is required to be included on the label similar to the way in which an ingredients list is required for other soft drinks. However, the regulations do not require the mineral with the greatest quantity to be listed first but in a standard order which has been agreed by industry. Calcium is usually the first to be listed with the last item being the pH level. Some additional minerals can be included but are discretionary.

A typical mineral analysis of a Natural Mineral Water

Mineral analysis	
TYPICAL VALUES	mg/l
Calcium	30
Magnesium	2
Potassium	2
Sodium	2
Bicarbonate	95
Chloride	12
Sulphate	25
Nitrate (NO ₂)	12
Dry Residue	156
At 180°C	
PH (at source)	6.8
e.g.	
Iron	
Aluminium	
Fluoride	
Silica	

b) Spring Water

Spring Water is required to include details of the source name and its location. There should be no confusion with any Natural Mineral Water.

Legislation and Good Practice

The description applied to the water which appears on the label will indicate certain information. The description might include one or more of the following:

- As captured at source without chemical or bacteriological treatment, including no micro-filtration
- Sparkling can be used where the product is carbonated
- Still can be used to indicate a non-carbonated product

c) Table Water

Various descriptions may be applied to Table Water to help to explain the treatments applied. These may include the following:

- *Blended* – a mix of more than one source
- *De-ionised* – water in which most of the major ions have been removed by de-ionisation
- *De-mineralised* – water which has been subjected to distillation, reverse osmosis or de-ionisation
- *Purified* – water which has been treated to remove pollutants or disinfectants
- *Re-mineralised* – water which is made up to a particular chemical composition
- *Sparkling* – can be used where the product is carbonated
- *Still* – can be used to indicate a non-carbonated product

d) Fruit juice

The majority of fruits which we use to produce fruit juice are imported into the UK. In some cases the juice will have been removed from the fruit in its country of origin, concentrated and then shipped to the UK for reconstitution (see **Fruit Juice**). In this case, the label on the fruit juice will state 'Made from concentrate'.

Under the Regulations governing fruit juice production, it is permissible to add some sugar (up to 15 g per litre) to regulate the sweetness of the juice. This is known as technical correction. If

higher levels are added the products must be described as 'sweetened juice'. In either case, the product can no longer be labelled as 'pure fruit juice' and the addition of sugar must be indicated on the label.

e) Claims

Apart from specific regulations covering certain drinks, general guidelines have also been issued by regulatory authorities which relate specifically to the use of certain terms in relation to soft drinks. Claims that are made regarding a product must be supported by evidence which clearly establishes the claim being made. Claims made regarding foods are governed by legislation.

2 SOFT DRINKS PRODUCTION

Responsibility for ensuring that food remains in prime condition is shared by everyone involved in food production and handling. Strict legal controls are in place across Europe to ensure high levels of safety, hygiene and quality in commercial processing and food handling.

Food manufacturers operate quality assurance systems to ensure safe food production. The greatest risk to the consumer is through mishandling of food in establishments where food is served – such as restaurants, hotels, schools and hospitals – and in the home. The home in particular is an area where improved consumer awareness of food safety issues can reap real rewards in terms of risk reduction.

2.1 Processing

Whether raw or processed, food is rarely sterile when it reaches the consumer. It usually contains bacteria or other microbes, many of which are harmless such as the friendly bacteria in natural yoghurt and Natural Mineral Water. However, most food spoilage is due to microbial activity. Whilst spoilage does not necessarily make food unsafe to eat or drink, it can make it unpalatable. Commercially manufactured foods are designed to be safe. A number of common preservation methods are used to destroy microbes or stop them from growing. In the case of soft drinks and fruit juices these include:

Legislation and Good Practice

- Heat treatments such as pasteurisation and sterilisation
- Canning
- Low temperature storage, e.g. refrigeration and freezing
- The addition of chemical preservatives, such as organic acids*
- Natural anti-microbial products
- Modification of the atmosphere in which the food is packed, e.g. vacuum packing and gas packing
- Carbonation*

*Not applicable to pure fruit juices

Bottled waters depending on their category may undergo treatments to:

- remove unstable elements or undissolved matter e.g. mechanical filtration
- influence microbial population e.g. ultra filtration, ultra violet or ozone
- influence chemical composition e.g. ion exchange, activated carbon filtration or nano filtration

These treatments are approved under legislation.

2.2 Quality control

Food safety is a shared responsibility of everyone involved in the food chain. This includes primary producers, food companies, establishments that serve food, and consumers.

At the ingredients supply level, there are critical control points at every stage in crop agriculture where contamination of produce can be minimised by following good practices. Fresh fruits, vegetables and herbs can also become contaminated if they are fertilised with animal manure or come into contact with impure water.

At the food manufacturer level, the majority of companies have in-house quality assurance systems to ensure the safe production of food. Throughout the European Union, there are moves towards less prescriptive regulation and greater emphasis on industry responsibility. Measures currently used to help prevent contaminated food from reaching the consumer include:

- using good quality raw materials from assured suppliers
- auditing of these suppliers by manufacturers to ensure that standards and procedures arising

from HACCP (Hazard Analysis Critical Control Point) are in place with records kept at all stages of the supply chain

- following good manufacturing practices
- using management systems and control of hazards during production, processing and sale of food
- providing training programmes for all food industry personnel
- carrying out research on pathogens and how best to control them
- exchanging information on food safety
- establishing industry standards and codes or practice

Controlling the process is important to ensure that drinks:

- are properly preserved
- maintain integrity
- achieve their shelf-life

These goals are common to all the drinks categories.

Every step in the process needs to be controlled but some are critical to food safety. This is where **Hazard Analysis Critical Control Points** (HACCP) is used to identify those points in the process which are critical. A **Hazard** is a potential cause of harm to the product in terms of spoilage and food safety. A **Critical Control Point** is a point or step in a process which, if not controlled, will allow the hazard to go through to the consumer. Implementation of a risk assessment and risk management system is a legal requirement to satisfy due diligence.

2.3 Codes of good manufacturing practice

A number of standards have been set by the industry as a voluntary means of maintaining quality and safety levels within the soft drinks industry. These cover a variety of production processes ranging from dispensing products from bag-in-box systems under pressure to checking fruit juice authenticity, from checking glass bottle quality levels to testing closure systems.

Legislation and Good Practice

These codes of good practice all help to ensure that manufacturers are providing safe, high quality products to consumers, meeting their due diligence requirements under the law. In some cases, industry codes of practice go beyond existing legislation setting benchmark standards for members of the industry to aspire to and achieve.

A good example is the European Quality Control Scheme for fruit juices. It applies across the EU to ensure that fruit juices on sale comply with both the legal standards and the code of practice established by the industry. It serves as a guarantee to consumers that fruit juices have not been adulterated or tampered with.