

How 'flavourful' is your food? Just read the label...

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When you read a food label, you so often see the term “flavouring” listed. Why are flavours added to food? The answer is quite simple: Consumers have set expectations of how certain foods are supposed to taste. Flavours are often added to restore or ‘upgrade’ the taste lost in processing or simply to improve on nature.

All flavours start with food. If we take a banana, for instance, we can extract that particular flavour, using a number of technical means, and concentrate it. A producer of banana cake, which features banana as an ingredient, may find that adding banana flavouring gives the otherwise bland product a superior taste. The cake maker will simply need to decide what type of flavouring to use: natural, ‘nature identical’, or artificial. A good example to explain these differences is vanilla - the most widely used flavour of our time.

Natural

Its distinctive aroma is due to one special chemical substance, Vanillin, which was first discovered in 1874. When it is taken from the vanilla bean – it is classified as a ‘natural’ flavouring substance. Natural flavours must be obtained from vegetable or animal materials.

Nature identical

The flavour industry has learned to analyse the molecules that make up a flavour. If the chemical structure of a particular flavour is known, then with a chemical tool-box, one can copy that molecule and make it industrially in a chemical plant. When the chemical structure of a naturally occurring flavour is copied exactly, then you obtain a ‘nature identical’ flavour. ‘Natural’ and ‘nature identical’ flavours are indistinguishable in terms of taste or chemical structure.

Vanillin is a prominent example of a nature identical flavour. It is not “artificial” because it can be found in nature and man has figured out a way to copy it.

Artificial

This takes us to the third grouping - artificial flavours. Scientists, when analysing the molecules that make up a particular flavour, have the ability, again, to use their ‘tool-box’ and modify such molecules, strengthening and improving on the taste.

For instance, Ethylvanillin is a more potent version of the natural or nature-identical Vanillin and is three to four times stronger than plain Vanillin. Although purists contend such flavours have a more “artificial” taste, sometimes they are necessary due to the economics of extracting natural or nature-identical flavours and sometimes consumers’ palates demand ‘enhanced’ flavourings.



It's all on the label. What does the law say?

The major piece of legislation in Europe that governs what information must be included on the label is known as the European Flavouring Directive (88/388). Along with Directive 91/71, these Europe-wide laws jointly set out the definition of flavourings, general rules for their use and the maximum levels allowed.

Distinct from regulations in the U.S., where flavours are always qualified as either natural or artificial, European law only requires use of the word "flavouring". If it's natural flavour the label will either say "natural flavouring" or specify the type, such as "Malt Vinegar Flavour". If it's nature identical or artificial, then the label will simply list "flavouring".

Safety

The EU now has a register grouping all flavourings in use in the EU. There is currently a major effort to evaluate all the substances for safety and draw up a single positive (or authorised) list. This Europe-wide list will seek to avoid the current situation, whereby some perfectly safe artificial flavours are accepted in some Member States, but not in others.

Reference

[European Commission website: Chemical safety.](#)