

Food Additives

Why are additives given E numbers?

EU legislation requires most additives used in foods to be labelled clearly in the list of ingredients, either by name or by an E number.

This provides you with information about the use of additives in foods and allows you to avoid foods containing specific additives if you wish.

Giving an additive an E number means that it has passed safety tests and has been approved for use here and in the rest of the European Union.



What are the different types of additives?

Food additives are grouped by what they do. The additives that you are most likely to come across on food labels are:






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| • Antioxidants | E 300's |
| • Colours | E 100's |
| • Emulsifiers, stabilisers, gelling agents and thickeners | E 400's |
| • Flavourings | E 600's |
| • Preservatives | E 200's |
| • Sweeteners | E 950 – 969 |
| • pH regulators and anti-caking agents | E 500's |

The full list can be found at http://en.wikipedia.org/wiki/E_number







Additives may be:

- **natural** – found naturally, such as extracts from beetroot juice (E162), used as a colouring agent;
- **manmade versions** – synthetic identical copies of substances found naturally, such as benzoic acid (E210), used as a preservative;
- **artificial** – produced synthetically and not found naturally, such as nisin (E234), used as a preservative in some dairy products and in semolina and tapioca puddings.

Additives are included in food products for many different reasons. The table below shows the type of additives added, the reasons for inclusion and examples.

Additive type	Reason for inclusion	Examples
Preservatives	To make products last longer by protecting against the growth of micro-organisms 	Salt, sugar, vinegar, sulphur dioxide.
Colours	To improve or change the appearance. To replace colour lost through processing methods 	Beetroot red (E162) Caramel (E150) Tartrazine (E101)
Flavours and Flavour enhancers	To improve or change the flavour. To replace flavours lost through processing methods. 	Vanilla, sugar, saccharine, aspartame, monosodium glutamate.
Emulsifiers and stabilisers	To improve the texture. To stop foods separating 	Lecithin, xanthan gum.
Antioxidants	To make foods last longer. To stop fatty foods from going rancid. 	Vitamin C (ascorbic acid) Vitamin E (tocopherol)

Other Additives

Additive	Reason used	Example
Raising agents	Used to give a lighter texture to baked products 	Sodium bicarbonate.
Anti-caking agents	Stops powders and crystals sticking together. Added to flour. 	Calcium silicate.
Flour improvers	Helps to make bread dough stronger and more elastic. (The Chorley Wood Process). 	Ascorbic acid. (Vitamin C).
Thickening agents	Used to form a gel to thicken sauces 	Modified starch. Guar gum (E412).
Nutrients	Enrich the nutritional value of a food product. 	Vitamins and minerals.
Gelling agents	Used to make food set, e.g. jams and jellies. 	Pectin.

Benefits and limitations of inclusion of additives in food products for the food manufacturer.

Benefits	Limitations
Produces a wide range of food products.	Can be used to disguise inferior ingredients, e.g. flavours and colours in meat products.
Keeps food safe for longer by protecting against the growth of micro-organisms.	Some colours and flavours may not be necessary in a product.
To improve the colour, flavour, texture of a product.	Some consumers may have an allergy to an additive.
To restore original characteristics of a product e.g. canned peas are grey in colour after being processed. Green colouring is added to the peas as consumers expect peas to be green.	Adds to the cost of a product.
Helps maintain consistency in mass production e.g. use of emulsifiers to ensure ingredients in products do not separate.	Some consumers avoid food with additives.
To produce expected qualities in foods e.g. a dessert mix with yellow colouring and lemon flavouring.	

Benefits and limitations of inclusion of additives in food products for the consumer.

Benefits	Limitations
A wider variety of food products is available.	Consumers may not buy a product because it may have an additive they object to e.g. vegans oppose to the use of cochineal.
Can increase nutritional value e.g. vitamins added.	In some people can cause allergic reactions/people may have an intolerance.
Food lasts longer so don't need to go shopping as often.	Can be used to disguise inferior ingredients.
Makes food safe by protecting against the growth of micro-organisms.	Some colours and flavours may not be necessary.