

## **Food Additives Information and Sources**

Not all additives are harmful. The following are lists of the worst additives. For clarity, it is divided into Colours, Preservatives and Flavour Enhancers. It can be difficult to locate and avoid all additives so one suggestion is to simply avoid processed foods as much as possible. Cook and eat freshly prepared food whenever possible, avoid packaged foods and especially those with a long shelf life.

### **Colours**

**Many people blame sugar** but it may be the colours that sugar keeps company with in items like lollies, chocolates, ice creams, soft drinks, cordials and snack foods that are the REAL cause of the problem.

**Natural colours** such as caramel (150a-d), beet red (162), chlorophyll (140, 141) and beta-carotene (160a) have a good safety record and pose no problem.

**Artificial colours - Most commonly related to allergic reaction; *May be added to:***

Coloured foods like soft drinks, cordial, sweets, chocolate, packet desserts, cakes, biscuits, sauces, jelly crystals, toppings, snack foods, processed cheese, sauces, pickles, coloured medications and medication syrup for children.

- 102 Tartrazine
- 110 Sunset yellow FCF
- 122 Azorubine
- 123 Amaranth
- 124 Ponceau 4R
- 127 Erythrosine
- 129 Allura red AC
- 132 Indigotine
- 133 Brilliant blue FCF
- 142 Food green S
- 151 Brilliant black BN
- 155 Brown HT

6 food colours causing the most reaction:

- sunset yellow (E110)
- quinoline yellow (E104)
- carmoisine (E122)
- allura red (E129)
- tartrazine (E102)
- ponceau 4R (E 124)

**These six controversial bright red or yellow colours are commonly found in:**

Lollies, chocolate, soft drink, cordial, sports drink, iced doughnuts, iced cupcakes, iced biscuits, cakes, muffins, flavoured milk, medicines, ice cream.

### **Preservatives**

There are 5 groups of preservatives that are problematic:

#### **1. Sorbates**

Sorbates occur naturally in some fruits e.g. berries, but are synthesised and added to foods to inhibit the growth of moulds and yeasts that can cause foods to spoil (most commonly as potassium sorbate). Potassium sorbate is widely regarded as safe and unlikely to be hazardous. Both natural and added must be avoided on elimination diets to test for food sensitivities.

- 200 Sorbic acid
- 201 Sodium sorbate

## **202 Potassium sorbate**

203 Calcium sorbate

### **Commonly added to:**

- Cottage cheese, yoghurt, dried meat, dried fruit, pickles, wine especially sweet and sparkling wine, apple cider, flavoured syrups and toppings.
- Also widely used in pharmaceuticals including syrups, eye, ear and nose drops, contact lens solution, and many herbal supplements.
- Many personal hygiene products use potassium sorbate e.g. cleansers, shampoos, moisturisers, anti-aging creams, hand creams, eye shadow, mascara, blush, hair colour, cream-based concealers and other liquid products. It prevents the products spoiling or breaking down as they sit on the shelf or in room temperature storage for long periods of time.

## **2. Benzoates**

Benzoates occur naturally in cranberries, bilberries and other berries, vegetables, pepper, herbs, spices, peppermint and honey. Both natural and added must be avoided on elimination diets to test for food sensitivities.

210 Benzoic acid

**211 Sodium benzoate**

212 Potassium benzoate

313 Calcium benzoate

### **Commonly added to:**

- Non-cola soft drinks, cordials, orange juice and fruit drinks.

## **3. Sulphites or sulfites (sulphur-containing preservatives)**

Today they are still used in wineries to destroy undesirable bacteria in wine storage vats and slow spoilage. However, in a small number of sensitive asthma patients, they can trigger wheezing and throat tightening, frequently within one or two minutes of consumption. The most widely used is **sodium metabisulphite (223)** and sulphur dioxide (220):

**220 Sulphur dioxide**

221 Sodium sulphite

222 Sodium bisulphite

**223 Sodium metabisulphite**

224 Potassium metabisulphite

225 Potassium sulphite

228 Potassium bisulphite

### **Commonly added to:**

- Dried apricots, dried apple, 'fresh' fruit salad, cordial, juice, fruit juice drinks, dried vegetables (like dried peas and instant mashed potato), pickled vegetables (like onions and gherkins), pickles, chutney, sausages, frankfurts, devon, vinegar, beer, wine, especially white wine in casks. They prevent the darkening of dried fruit and juices and are used to preserve soft drinks, pickled onions and sausages.

## **4. Propionates**

All the propionates occur naturally in many foods and can be produced by bacteria as well e.g. in cheeses such as Swiss cheese.

280 Propionic acid

281 Sodium propionate

**282 Calcium propionate**

283 Potassium propionate

### **Commonly added to:**

- Breads, cakes, pastries as a mould inhibitor - calcium propionate 282 is the most common mould inhibitor and is used in humid weather where bread would otherwise go mouldy. Many bakeries now do not use it anymore so consume your bread within a couple of days or else freeze it for later eating.

## 5. Nitrites

Nitrites are on the watch list as they can be converted to nitrosamines in the body, which may cause cancer.

249 Potassium nitrite

250 Sodium nitrite

251 Sodium nitrate

**252 Potassium nitrate**

**Commonly added to:**

- Ham, bacon, corned beef, salamis, hot dogs, frankfurters and cured and canned luncheon meats – think of all these as 'processed meats' and limit your intake.

## Citric Acid

Citric acid prevents bacteria growth, it gives the citric/sour flavor.

Citric Acid is ok with naturally occurring citric acid. Artificially produced E330 or 330 additive, depending on where or how it is produced with using sulfuric acid, many believe the product might still contain mold and sulfur/sulfites not filtered out completely during the production (Sulfur dioxide and other sulfites - also referred to as sulphites).

330 & E330 : Citric Acid

**Commonly added to:**

- Cakes, biscuits, soups, all sorts of sauces, frozen packed and canned food products, sweets, marmalade's, ice creams.

## Flavour enhancers

Generally flavour enhancers cause no harm at levels normally eaten. But high doses given under experimental conditions have been linked to food intolerance symptoms (almost always in combination with other chemicals like amines and salicylates).

### **Glutamates**

**621 Monosodium glutamate (MSG)**

622 Monopotassium glutamate

623 Calcium glutamate

624 Monoammonium glutamate

625 Magnesium glutamate

### **Guanylates**

**627 Disodium guanylate**

631 Disodium inosinate

**635 Ribonucleotides**

Hydrolysed Vegetable Protein (HVP) – no number

**Commonly added to:**

- Soups, sauces, stock, gravies, seasonings, Asian and vegetarian dishes, flavoured crisps and snack foods, instant noodles. Asian cooks have used MSG extracted from seaweed for centuries as a way to flavour their dishes instead of salt.

## Reference:

1. **McCann D, Barrett A, Cooper A et al. Food additives and hyperactive behaviour in 3 year old and 8/9 year old children in the community: a randomised, double blinded, placebo controlled trial.** [Lancet 2007;370:1560-7](https://doi.org/10.1136/bmj.2007.370.1560-7)
2. [www.foodwatch.com](http://www.foodwatch.com)

3. <http://ehlt.flinders.edu.au/education/DLiT/2006/food%20additives/theyare/avoid.htm>

The following is a list of common food additives that have negative health and/or behavioural effects. There are a number of food additives that are not on the list but they are not as common and have less severe reactions.

- Colours: [102](#), [E107](#), [110](#), [122-129](#), [132](#), [133](#), [142](#), [150](#), [151](#), [155](#), [160b](#)
- Preservatives: [200](#), [210-213](#), [220](#), [221-227](#), [228](#), [249-252](#), [280-283](#)
- Antioxidants: [310-312](#), [319-321](#)
- Emulsifiers: [407](#), [413](#), [416](#), [421](#),
- Anti-caking agent: [553](#)
- Flavour Enhancers: [621](#), [622](#), [627](#), [E634](#), [635](#)
- Miscellaneous Additives: [E905](#), [925](#), [926](#), [1201](#), [1520](#)
- Artificial Sweeteners: [950](#), [951](#), [E951](#), [952](#), [954](#)