

## Appendix 2

### The list of labels that may or may not be taken into account before buying a product or ingredients to make ones own cosmetics

- **No animal ingredients (100% vegetarian ingredients or Vegan)**
- **No animal testing (also known as Cruelty free products)**
- **No artificial colors, sweeteners or flavours**
- **Containers are recyclable**
- **Fair trade**

Fair trade is an organised social movement that aims to help producers in developing countries to make better trading conditions and promote sustainability. The movement known as fair trade indicating the certification advocates the payment of a higher price to exporters as well as higher social and environmental standards.

- **Certified organic ingredients**

Organic certification is a certification process for producers of organic food and other organic agricultural products. In general, any business directly involved in food production can be certified, including seed suppliers, farmers, [food] processors, retailers and restaurants.

Requirements vary from country to country, and generally involve a set of production standards for growing, storage, processing, packaging and shipping that include:

- no human sewage sludge fertilizer used in cultivation of plants or feeding of animals
- avoidance of synthetic chemical inputs (e.g. fertilizer, pesticides, antibiotics, food additives, etc.), genetically modified organisms, irradiation, and the use of sewage sludge;
- use of farmland that has been free from prohibited synthetic chemicals for a number of years (often, three or more);
- keeping detailed written production and sales records (audit trail);
- maintaining strict physical separation of organic products from non-certified products;
- undergoing periodic on-site inspections.

- **Biodegradable**

Biodegradation or biotic degradation or biotic decomposition is the chemical dissolution of materials by bacteria or by other biological means. Biodegradable simply means to be consumed by microorganisms and returned to compounds found in nature. The term is often used in relation to ecology, waste management, biomedicine, and the natural environment (bioremediation) and is now commonly associated with environmentally friendly products that are capable of decomposing back into natural elements. Organic material can be degraded aerobically with oxygen, or anaerobically, without oxygen. Biosurfactant, an extracellular surfactant secreted by microorganisms, enhances the biodegradation process. Biodegradable matter is generally organic material such as plant and animal matter and other substances originating from living organisms, or artificial materials that are similar enough to plant and animal matter to be put to use by microorganisms.

**Resources**

Diaz, E. (editor). (2008). [\*Microbial Biodegradation: Genomics and Molecular Biology\*](#) (1st ed.). Caister Academic Press. ISBN 1-904455-17-4.

[Measuring Biodegradability](#)", *The University of Waikato*, June 19, 2008

Agamuthu, P. Biodegradability and Degradability of Plastic Waste, *International Solid Waste Association*, November 9, 2004.

- **Paraben free**

Parabens are a class of chemicals widely used as preservatives by cosmetic and pharmaceutical industries. Parabens are effective preservatives in many types of formulas. These compounds, and their salts, are used primarily for their bactericidal and fungicidal properties. They can be found in shampoos, commercial moisturisers, shaving gels, personal lubricants, topical/parenteral pharmaceuticals, spray tanning solution, makeup, and toothpaste. They are also used as food additives. They are becoming increasingly controversial, however, because they have been found in breast cancer tumors (an average of 20 nanograms/g of tissue). Parabens have also displayed the ability to slightly mimic estrogen (a hormone known to play a role in the development of breast cancer). No effective direct links between parabens and cancer have been established, however. Another concern is that the estrogen-mimicking aspect of parabens may be a factor in the increasing prevalence of early puberty in girls. Most known parabens are methylparaben and ethylparaben.

- **Mineral oil free (Petroleum free)**

A mineral oil is any of various colourless, odorless, light mixtures of alkanes in the C15 to C40 range from a non-vegetable (mineral) source, particularly a distillate of petroleum. The name *mineral oil* by itself is imprecise, having been used to label many specific oils over the past few centuries. Other names, similarly imprecise, include white oil, liquid paraffin, and liquid petroleum. Most often, mineral oil is a liquid by-product of the distillation of petroleum to produce gasoline and other petroleum-based products from crude oil. A mineral oil in this sense is a transparent, colorless oil composed mainly of alkanes<sup>[2]</sup> and cyclic paraffins, related to petroleum jelly (also known as "white petrolatum").

One of the common concerns regarding the use of mineral oil is its presence on several lists of comedogenic substances. These lists of comedogenic substances were developed many years ago and are frequently quoted in the dermatological literature. At the same time it is reported that highly refined and purified mineral oil found in cosmetic and skincare products is noncomedogenic (does not clog pores).

**Resources**

DiNardo, J. C. (2005), Is mineral oil comedogenic? *Journal of Cosmetic Dermatology*, 4, 2–3.

- **Free of chemical preservatives**

The meaning of such label is that the product is made without synthetic preservatives. Due to controversy surrounding the use of synthetic preservatives in food and cosmetics, some companies are turning to other options to help extend products' shelf life. Some are switching from synthetic to natural. Unfortunately all natural preservatives may not be as good as they sound, especially if taken in excess. But on a positive note they aren't as toxic as synthetic preservatives. The best option would be no preservatives at all, but then products would not be able to stay fresh that long.

The issue with manufacturing products entirely without the use of preservatives is that, besides taking a lot of time to make they are very expensive. Products manufactured without preservatives need to be fabricated in a sterilized environment using a flow hood similar to that found in hospitals and laboratories. They should also be refrigerated immediately after their first use. Because of this some companies are considering making products using natural preservatives.

There are ways of reducing microbial activity (such as using essential oils) in a more natural way. Antioxidants can help in this task as well. They will protect the oils, which start smelling bad when hit by light or air, from going bad and becoming susceptible to contaminants. This is a process that cannot be stopped 100%, but antioxidants have the ability of to slow down this process.

Antioxidants and essential oils are completely natural ingredients. Antioxidants, as the word implies, is a substance such as Vitamin E, Vitamin C or beta carotene that protects cells from the damaging effects of oxidation. Essential oils are powerful antiseptics that kill most of the harmful bacteria and fungi without causing any damaging effects to the human system. Essential oils are derived from plants, flowers, leaves and grasses. The discovery of these oils antiseptic properties was made in France during the cholera epidemic when it was observed that workers in perfume factories seemed to be almost fully immune to the disease while the rest of the population died.

**Ressources**

<http://www.chemicallyspeaking.com/archive/2011/04/15/preservatives-in-cosmetics.aspx>