

Chemistry in everyday life



[illegible]



citric acid



food coloring



flavour enhancer



emulsifier



sweetener



preservatives



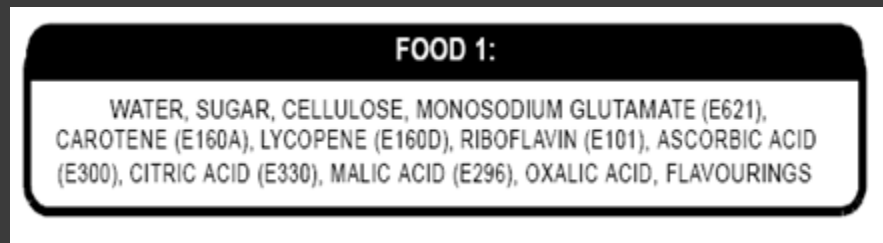
thickener

About chemistry in food...

- ◉ **Food additives** are substances added to food to preserve flavour or improve its taste and appearance.
- ◉ Some additives have been used for centuries; for example, salting or using sulfur dioxide as in some wines.
- ◉ Many more additives have been introduced, of both natural and artificial origin.



About chemistry in food...



WHAT'S IN AN E?

- ♦ E300 - vitamin C
- ♦ E150a - caramel
- ♦ E410 - locust bean gum
- ♦ E621 - monosodium glutamate
- ♦ E220 - sulphur dioxide
- ♦ E9540 - saccharin

- Have you seen the ingredients named with the **E-xxx** style? These are the **European codes for food additives**.
- According to the European legislation, each **additive** has a specific number. They are called “E-numbers”.

About chemistry in personal care products...





deodorant



mouthwash



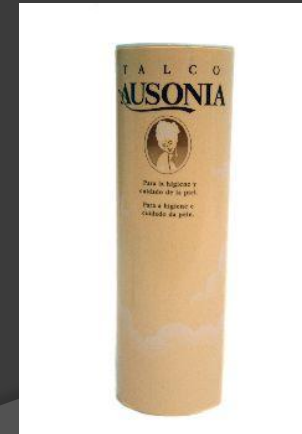
shampoo



toothpaste



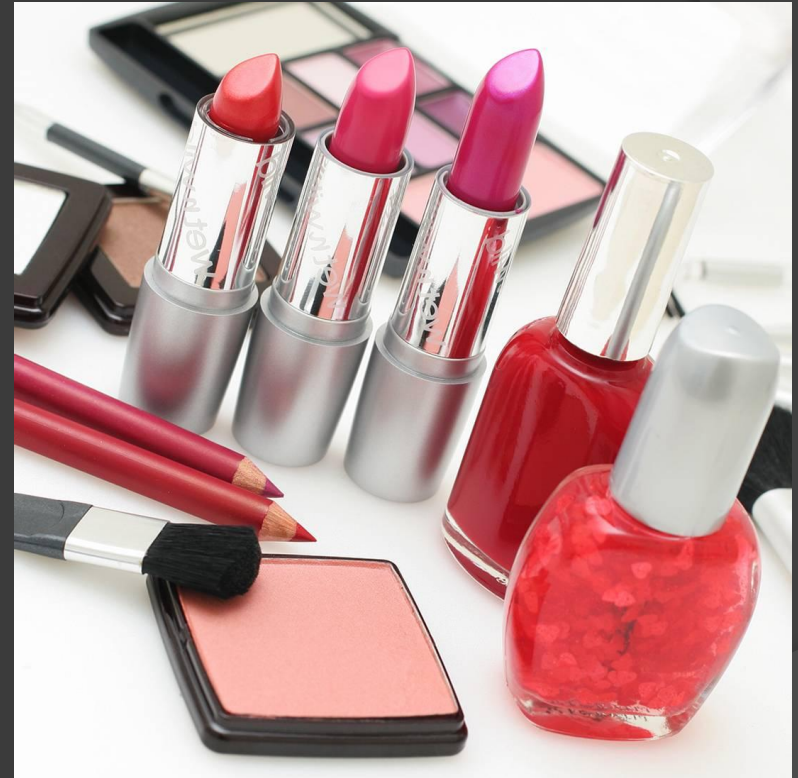
shaving cream



talcum powder

About chemistry in cosmetics...

- **Cosmetics** are substances used to enhance the appearance or odor of the human body.
- A subset of cosmetics is called "make-up", which refers to products intended to change the user's appearance.
- There are still health concerns regarding the presence of harmful chemicals within these products.





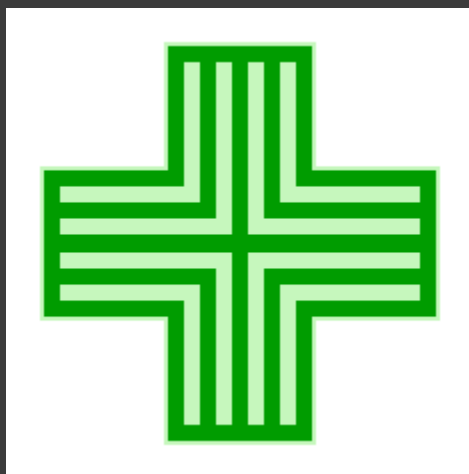
Lipsticks and lip balm contain oils, beeswax and perfumes. These protect, soften and brighten the lips.

Mascaras have a composition based on a volatile solvent, beeswax, pigments (iron oxide) and filmifying polymers.



Nail polish is made of lacquer, and consists of polymers, solvents, plasticisers, colourants, and perfumes.

About chemistry in medicine...



Pharmacy logo in Spain



Pharmacy logo in US

About chemistry in medicine...

- Chemistry is a huge part of medicine, both as a diagnostic and treatment tool.
- Chemistry departments in hospital medical labs analyze blood, urine, etc. for proteins, sugars and other substances.
- Blood analysis test the amount of potassium and sodium in our blood.



Do you know how to solve these problems?

- ◉ Toothache
- ◉ Stomachache
- ◉ Insect bites
- ◉ Headache
- ◉ Fever
- ◉ Constipation



Chemistry in household cleaning products



What do we use these products for?



multi-purpose cleaner



washing machine cleaner



glass and surface cleaner



disinfecting bathroom cleaner



stain remover



toilet bowl cleaner

About chemistry in household cleaning products...





C Corrosive



F Highly flammable



F+ Extremely flammable



O Oxidizing



Xn Harmful



Xi Irritant



E Explosive



T Toxic



T+ Very toxic



N Dangerous for the environment

About chemistry in household cleaning products...



- ⦿ The chemistry in household cleaning products affects our environment greatly.
- ⦿ For example, a very common component in cleaning products is chlorine.
- ⦿ Chlorine has gaseous elements that can be lethal if large quantities are released into the atmosphere.

- The most common ingredients in household cleaning products include alkalies, acids, detergents, other toxic chemicals
- Alkalies cause burns, and if swallowed can cause internal injuries.
- Acids can irritate and injure the skin and eyes.
- Caustic household cleaners can cause severe burning if swallowed or put on the skin.



Some recap questions...

- ⦿ Are food additives always artificial?
- ⦿ Are cosmetics an invention from the 20th Century?
- ⦿ Is there chemistry in our bodies?
- ⦿ Is it important to read the label of a product before using it?



Disclaimer:

This PPT was created by the authors of 'Chemistry in Everyday life' Unit and it is meant for teacher's education purposes only, it being designed and piloted within UAB TED Master's Degree in the academic year 2009-2010.

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