

# EVERYDAY COMPOUNDS: HYDROGEN PEROXIDE

COLOURLESS LIQUID, RESEMBLING WATER, THAT IS A STRONG OXIDISER, AND COMMONLY USED AS A BLEACHING AGENT & DISINFECTANT

## AS A BLEACHING AGENT

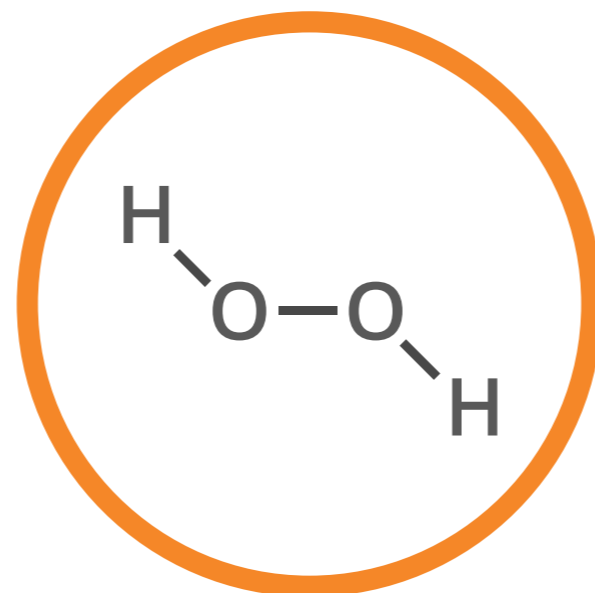
Around half of the two million tons of hydrogen peroxide produced each year is used to bleach paper. In homes, it's found in some bleaches as an alternative to chlorine bleaches. It's also used in some stain remover sprays as a bleaching agent.

Substances that are coloured usually contain groups of atoms known as chromophores, which absorb some wavelengths of visible light, causing colour. Hydrogen peroxide essentially destroys these chromophores.



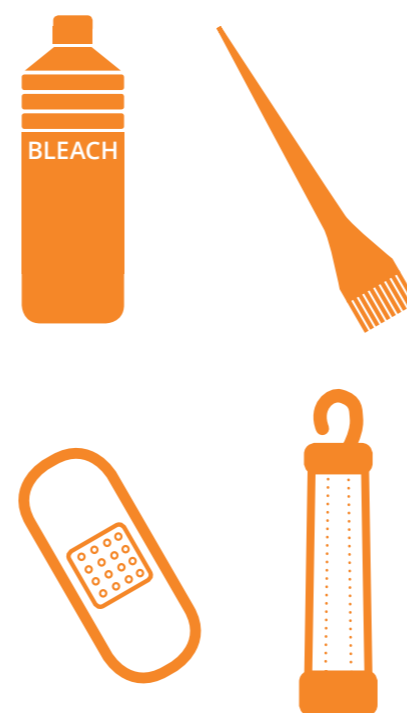
## AS A DISINFECTANT

Hydrogen peroxide's oxidising ability means it can be used as a disinfectant. If put on a cut, it foams, due to an enzyme in blood catalysing its breakdown into water and oxygen.



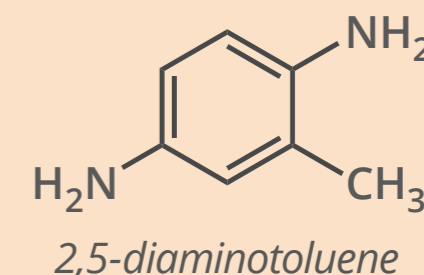
## HYDROGEN PEROXIDE

*Dihydrogen dioxide*  
Colourless liquid  
 $\text{H}_2\text{O}_2$



## IN HAIR DYES

Hydrogen peroxide is used in hair dyes to oxidise the melanin pigments in hair, causing them to lose their colour. It also helps oxidise other chemicals in the dye mixture, such as 2,5-diaminotoluene, to help produce the dye molecules that colour the hair.



## IN GLOW STICKS

Hydrogen peroxide is included in one of the compartments in glow sticks. It reacts with the ester compound that is contained in the other compartment, and a product of this reaction then decomposes, producing energy that excites the dye & leads to the emitted light.

