

How does Poppit Sanitiser work?

PURPOSE

An explanation of the mode of action for hydrogen peroxide in Spa & Spa Pool water.

BACKGROUND

Since chlorine is and has been the standard sanitiser for pool & spa water, and some people do not associate hydrogen peroxide as a sanitiser, it may be useful to understand the mode of action of Hydrogen peroxide.

INFORMATION

In broad terms, Poppit Spa Sanitiser work by OXIDISATION.

Hydrogen peroxide is one of the most powerful oxidisers known – stronger than chlorine, chlorine dioxide and potassium permanganate and through CATALYSIS can be converted to Hydroxyl radical with reactivity second only to Fluorine.

Oxygen is very reactive; it tends to suck electrons away from other molecules (a process called ("Oxidation"), thus destabilising those molecules, to the point that they may change their shape (and thus their function) or even break apart.

Crucially, Hydrogen peroxide can't be excluded from cells; it can pass through cell membranes easily. Once inside a cell, it usually breaks down into a hydroxyl radical and hydroxide ion. The hydroxyl radical (HO+) is extraordinarily reactive, and will steal an electron from almost any organic substrate it comes in contact with.

DNA is a very susceptible to oxidative damage, and since bacteria have a single chromosome controlling all their life functions, that kind of damage can be disastrous to them.

SAFE - Despite its power, hydrogen peroxide is a natural metabolite of many organisms which decompose the Hydrogen peroxide into water and oxygen. H2O2 is also formed by the action of sunlight on water – a natural purification system for the environment.

