

Don't let the personal or business interests, greed or prejudice of others, ill-informed judgements or ignorance influence your decision on how best to sanitize your swimming pool water – Research the alternatives which are available carefully and decide what is best for your purposes then instruct your pool technician accordingly. *It's your pool, your health & wellbeing, your money..... your choice!!*

*Adverse sweeping comments are sometimes made about the performance of chlorine-free swimming pool sanitizers **without** the best of intentions in mind!*

It's easy to group products together and then identify a weakness of one product in the group in order to condemn the group as a whole. The inference often made about the performance of chlorine-free sanitizers is that they don't work. In fact this is not true – For example Copper<sup>2+</sup> sanitizers have an extremely good record in controlling micro-organisms going back over 3000 years (the ancient Egyptians and Romans used to keep drinking water clean by storing it in copper vessels), and if one wants to be “picky about what will and won't kill what” Chlorine, for example, will NOT kill Cryptosporidium or Giardia oocysts which is a big concern for public swimming pool operators.

Those who support the use only of Chlorine-based products for swimming pool sanitation purposes, often argue that copper based products don't kill micro-organisms fast enough. It may be true that for *some* micro-organisms copper does take longer to kill the organism than chlorine, however bacteria don't need to be killed quickly in order to be rendered harmless. Copper<sup>2+</sup> sanitizers work in the first instance by irreversibly “deactivating” micro-organisms **on contact** by interfering with their metabolism, the micro-organism then dies over a period of time from a few minutes up to a few hours depending upon the species of micro-organism concerned. During this “deactivated phase” while the micro-organism is dying, *it cannot reproduce, grow or multiply and bacteria which cannot reproduce grow or multiply is not harmful or infectious.*

Copper<sup>2+</sup> has many applications which are well established in antimicrobial disinfection control including combating algae, bacteria, larvae, viri and fungi.

So... Does Copper<sup>2+</sup> deal with all microbial species? – “No” **BUT THEN NOR DOES CHLORINE.**

**However Copper<sup>2+</sup> does have a number of hugely important advantages over chlorine:**

Copper<sup>2+</sup> is NOT ozone depleting and so does not contribute to the thinning of the ozone layer in our atmosphere.  
Copper<sup>2+</sup> does NOT aggravate human health problems as chlorine does (such as asthma, eczema, psoriasis).  
Copper<sup>2+</sup> does NOT form cancer causing by-products (Trihalomethanes) like chlorine does.  
Copper<sup>2+</sup> does NOT form Trichloramines which damage lungs, cause sore eyes and corrode building structures.  
Copper<sup>2+</sup> does NOT rot or bleach swimsuits or pool equipment as chlorine does.  
Copper<sup>2+</sup> products generally are safer to store and handle than chlorine-based products.  
Copper<sup>2+</sup> lasts much longer in the pool and is used up only by biological demand (dealing with bacteria and algae).  
Copper<sup>2+</sup> is NOT effected by sunlight or heat and thereby requires less frequent dosing, saving time and cost.

**A search of records in the US for disease outbreaks has not found anything where copper<sup>2+</sup> was used for micro-organism control.**

**No chemistry implicates copper as cancer causing (carcinogenic).**

The fact of the matter is that no one method of micro-organism control is fully effective against every form of microbial attack whilst at the same time being non-hazardous to human health and the environment, but, on balance, it's our view that Copper<sup>2+</sup> sanitizing systems, when properly applied, are a much more attractive option for microbial control in domestic swimming pools – when all the arguments are considered.