

Hypochlorous Acid Germicide (HOCl)

- the scientific facts...

Why was HOCl selected for UVsafe™ when there are so many disinfectants?

1. **HOCl is now the preferred choice because it is so effective and natural.** It is safe for sanitising hands or any part of your body. It can be sprayed, wiped or fogged through the air. UVsafe™ HOCl acts directly on contact, there is no need to wait for it to take effect, its action is instant and it has a shelf life of 12 months.
2. **UVsafe™ HOCl formula was created by the manufacturers, a team of professional and responsible scientists.** They were selected by the specialist product development consultants, Longshire Ltd, for the new UVsafe™ brand that they created.
UVsafe™ HOCl is distributed in the UK by 21 Clinic, specialists in training, merchandising and after sales support. The manufacturers of HOCl were chosen primarily because they have the correct manufacturing method and have created a stabilised HOCl solution for a truly consistent shelf life.
4. **The manufacturer is a UK company.** They have invested a seven figure sum to be able to have the correct regulatory approvals for both producing and also selling HOCl.
5. **HOCl was also chosen because it is now widely accepted to be the most effective, user friendly germicide when correctly produced.** It is organic, absolutely natural and totally non-toxic.
6. **HOCl is the perfect companion for the UVsafe™ Advanced LED panel.** This LED panel emits radiation wavelengths known to attack virus, germs and bacteria on all surfaces and on all bugs hanging in the air. HOCl is safe and ideal for use to sanitise when the LED radiation is switched off. LED UV must not be used when anybody is present.

What is Hypochlorous acid (HOCl)?

Hypochlorous acid is a very effective germicide and disinfectant. It is the most effective known biocide. So how does it work? It is a biocide that is very safe for humans and animals. In fact, everyone has it in their body. This weak acid with the chemical formula HOCl is the same chemical that is produced by the human immune system to kill invasive organisms and fight infection.

In a nutshell, the white blood cells (neutrophils) in our immune system constantly produce Hypochlorous acid to attack any invasive organism through the myeloperoxidase-mediated peroxidation of chloride ions—in very simple terms our bodies create this acid to destroy any intruder that it sees as an enemy.

The manufacturers discovered that HOCl is best produced through electro-dialysis (ED), an extremely complex process to convert the ingredients into a disinfectant and germicide. The ingredients are purely salt and water but the process to make it is challenging.

HOCl fights bacteria and inflammation after an infection or trauma. HOCl has the power to eradicate dangerous organisms without harming our cells. HOCl is one of the only agents that is both non-toxic and is lethal to almost all known dangerous bacteria, germs and viruses that threaten our health.

The process mimics the human immune system to produce the natural force of HOCl to combat viruses, bacteria and other micro-organisms. What could be more safe!

Why isn't Hypochlorous Acid everywhere?

Unpredictable shelf life and lack of stability when stored prevented its widespread use until recently. HOCl is the most Reactive Oxygen Species. Until recently, it would only remain stable for a few days and then turn back into plain salt and water.

HOCl solutions have however been used for over 100 years. In the early 1900's and during the First World War, HOCl solutions were made at the point of use to sanitise medical equipment and for dressing wounds.

What has changed?

The inventors of the method have developed a unique process of manufacture and that process is not sold to others. While producing an HOCl solution is not challenging, many other manufacturers have found stabilising it to have a consistent shelf life problematic.

HOCl is now manufactured by the suppliers to UVsafe™ in a very specific way that allows the solution to be stable for much longer than previously available. Correct high quality ingredients and this manufacturer's clever process has created an absolutely stable and fully approved 12-month minimum shelf life with no reduction after opening that many others should not claim.

Hypochlorous acid and Coronavirus May 2020

National and international reference laboratories have proven that produced correctly, HOCl is very effective to deactivate human coronaviruses. While there is significant evidence of studies indicating that it will deactivate Covid-19, no company can claim this as peer reviewed scientific studies take many months to be submitted and approved.

One study is of particular interest: in 2016, the University of Washington School of Public Health reported that HOCl was more than 99.999 percent effective in eliminating coronavirus OC43, an extremely similar virus to COVID-19.

HOCl has an extra edge over peroxide-based chemicals and bleach because it is far more powerful and will not cause discoloration of most carpets, furniture, your shoes, clothes or other textiles.

The HOCl product manufactured for UVsafe™ has passed British Standard tests for virus efficacy.



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Is HOCl easy to manufacture?

There are some companies offering simple generators and claim that you can make your own HOCl. Some appear inexpensive but they are not regulated and so cannot be trusted to produce pure HOCl.

However, making your own solution opens up a regulatory can of worms. You have become a biocide manufacturer and therefore you need to comply with EU528/2012. Doing so is very complex and expensive, the regulations are strict. According to our manufacturers, companies exposing the consumer to these risks will in time be investigated by the UK regulatory authorities.

Some manufacturers offer small devices. They appear to claim it is easy to make your own HOCl at home but the risks to the purchaser of it not being effective are significant.

Despite this, a number of new businesses have now been set up to profit out of the current pandemic, selling their own random form of "HOCl". This may well contain undesirable ingredients to preserve stability which would make it unsuitable for most applications.

Why does UVsafe™ not make their own HOCl?

It looks easy but our research into selecting a safe, effective, germicidal fluid as a convenient companion product for the UVsafe™ LED-UVC light panel might have been more profitable but we are not scientists. We do not wish to manufacture; we want to be free to select the best, produced by expert scientists, with a product fully approved by the regulators and capable of attacking virus and almost all infections.

We are proud of our reputation, if this manufacturer were not the best we would have selected whoever is. Our skill is providing the support, training and marketing materials that every commercial retailer needs.



HOCl: Harnessing nature's germ killer
<https://www.optometrytimes.com/blog/hypochlorous-acid-harnessing-natures-germ-killer>
Picture courtesy of Optometry Times



If you require more detailed scientific information. Please email your request providing your full contact details to: scandamail@aol.com.



UVsafe™ treatment cabinet for stock (clothes rail and/or shelf options).

UVsafe™ HOCl and UVsafe™ LED radiation provide all you need to attack the infections that are lurking in your premises.

LED radiation is generally regarded as safe but emitting UV radiation it will attack every living cell it strikes, exactly what is need for disinfection but not any human or animal., can be exposed to it.

To treat a room with LED radiation, all entrances must be secured to prevent access. Pre-set timing allows it to be put on and to switch off when absolutely no-one is in the room. When this cannot be done HOCl ideal for both small or to mist spray large areas without any risk of damaging anything.

UVsafe™ accessories like the UVsafe™ cabinets make treating collections of small or large objects safe and this is so much faster than wiping every item individually. Such close exposure means higher intensity and that means everything is sterilised together in a matter of minutes. UVsafe™ secure treatment cabinets can be designed to suit your particular needs according to the size; stock, office equipment, decontaminating clothes or simply all your shopping, your post and anything else.

No LED radiation can pass through ordinary glass or plastic transparent panels. These should be used so that the glow of the cool blue light can be seen and to let everyone know that you care about making your premises free of any infection to keep your visitors safe.

Every UVsafe infection treatment product is supplied with information signs and stickers, plus clear warning signs where needed. Disposable gloves, visors and others accessories are also available.

Visit our consumer website <https://21clinic.co.uk/uvsafe-antiviral-products> to see and read the information that customers and employees concerned about their welfare will want to know.



For more information about UVsafe™ technology and retail, business and home decontamination accessories and informative display signs, go to 21clinic.co.uk. First, click on the "Treatments" section and then click on [UVsafe LED & HOCl Product brochure 05.07.2020.pdf](#).

Click on the other items in the treatment section to examine the remarkable health and cosmetic benefits that other 21 technology and nutritional supplements will deliver.

If your company is involved in offering health & beauty services to your staff or to consumers, to see what we can do for you or your business or if you would like to learn more about job