



"A revolutionary approach to health"

21 April 2020

The use of Afrisan Ag+ in Aerosolized hydrogen peroxide tunnel for the disinfection of SARS Cov-2

With regards to our conversation on the 20th April 2020 and specific questions received previously by email, I have prepared the following explanations supported by scientific clinical evidence supplied by the FDA – USA and the EU in addition to supporting documentation.

The Product.

Afrisan Ag+ is a 100% South African manufactured product. It comprises 50% hydrogen peroxide and ionised nano silver particles. Due to its complexity of manufacture, there are only four other manufacturers worldwide that manufacture a true silver stabilized hydrogen peroxide. Although higher in price than other disinfectants, it provides disinfecting solutions in areas that are not permissible with other products due their toxicity profiles. In addition, the addition of nano silver particles provides an additional layer of disinfection (20x gain of function) that oxygen cannot perform.

Annexure A – The SDS of Afrisan AG+.

Available Disinfectants

There are many chemicals that behave as disinfectants including Aldehydes, Alcohols, Phenolic compounds, Chlorine and its derivatives, Quaternary ammonia compounds, Biguanides, Peracetic acid and hydrogen peroxide. All these chemicals have a place in surface disinfection however not all are effective against viruses and when one adds the human component almost all have to be discounted.

FDA & EU approval for Hydrogen Peroxide.

Annexure C provide evidence that the FDA in the USA as of 21st April 2020 has approved a host of products containing the active ingredient Hydrogen Peroxide for use with SARS-CoV-2 and can make disinfecting claims.

Annexure D on page 2 which details the permission by the EU to allow hydrogen peroxide's use for the disinfection of Covid-19

Is Afrisan AG+ clinically proven to kill Covid-19

The short answer is yes, according to the scientific studies attached.

1. Annexure E – Persistence of coronaviruses on inanimate surfaces (Journal of hospital infection)
 - a. The study shows that a 0.5% solution was able to effect a >4.0 log reduction of HCoV within 60 seconds.
 - b. Further additional reading on the particular strain https://en.wikipedia.org/wiki/Human_coronavirus_229E

Email for further information to carol@bmmprint.com

Is silver contained in Afrisan AG+ safe for humans?

- a. Silver has been known for centuries as a disinfectant and even today is used on neonates.
- b. Silver toxicity is related to concentration and in Annexure-I the FDA has stated that 17ppm with hydrogen peroxide is safe in bottled drinking water. 's content is well below this level.

Are there any detrimental effects to the eye and nasal mucosa?

1. Annexure J contains a study of Vaporised Hydrogen Peroxide in a Boeing 747 cabin. Concentrations from 285ppm to 600ppm resulted in log reductions 10^4 to 10^6
2. Annexure K discusses Vaporised Hydrogen Peroxide at 10ppm detailing a log reduction of 10^2 after 2.5 minutes yet a 10^3 reduction after 5 minutes whereas a $>10^4$ log reduction for 90ppm after 10 minutes.
3. Annexure L discusses the ocular response to hydrogen peroxide at different concentrations. At levels of 800ppm did not induce significant corneal or conjunctival epithelial staining after 5 minutes of exposure.
4. Annexure M states that historically 1-3% (10,000 – 30,000ppm) has been used topically as an on-eye antibacterial agent 3-5 times per day without causing significant injury. (Grant 1993)

Conclusion:

It is not novel that Vaporised / Aerosolized hydrogen peroxide is used in disinfecting tunnels. Annexure N It is known that only hydrogen peroxide is the safest chemical to use, at the right concentration, where humans require disinfection.

Several studies have revealed 10^3 - 10^6 log reduction in microbial activity using varying H_2O_2 concentrations. The balance needs to be created whereby one can provide the highest permissible concentration for human safety, yet obtain a respectable viral log reduction in the shortest possible time frame.

Based on the attached ocular studies, the eye being more sensitive than nasal mucosa, the concentration of 800ppm is recommended.

Based on other studies, at 800ppm one could expect a log reduction greater than 10^3 after a few minutes and greater than 10^4 after 10 minutes. This is an acceptable reduction and time frame considering the environment one is working within.

The inhalation recommendation is 1ppm, however these studies were aimed at factory workers who were surrounded with hydrogen peroxide fumes, eight hours a day over long periods of time. In addition, the subject will only be walking through the tunnel for a few seconds and holding one's breath for this duration is not unreasonable.

It is unnecessary to require a large log reduction in a short space of time as the residual spray will make contact with the individual for a long duration. Apart from the oxygen molecule oxidising the RNA genetic material the silver component works as an Electro Magnetic Field Field disruptor as it has nothing to penetrate. This combination ensures gain of function of Afrisan's efficacy over standard hydrogen peroxide.

The concentration of 0.08% will not act as a bleaching agent on clothing materials, hair, personal cosmetics products and the like.

Should you require any additional explanation or further supporting documentation, please contact me.

Yours sincerely

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