



## Frequently Asked Questions

### Organic Fresh®

#### 1. What are flavonoids?

Flavonoids are an important class of natural products; particularly, they belong to a class of plant secondary metabolites having a polyphenolic structure, widely found in fruits, vegetables, and certain beverages. They have miscellaneous favourable biochemical and antioxidant effects associated with various diseases such as cancer, Alzheimer's disease (AD), atherosclerosis, etc. Flavonoids are associated with a broad spectrum of health-promoting effects and are an indispensable component in a variety of nutraceutical, pharmaceutical, medicinal and cosmetic applications.

This is because of their antioxidative, anti-inflammatory, anti-mutagenic and anti-carcinogenic properties coupled with their capacity to modulate key cellular enzyme functions. They are also known to be potent inhibitors for several enzymes, such as lipoxigenase and phosphoinositide 3-kinase.

In nature, flavonoid compounds are products extracted from plants and they are found in several parts of the plant. Flavonoids are also used by vegetables for their growth and defence against plaques. They belong to a class of low-molecular-weight phenolic compounds that are widely distributed in the plant kingdom. They constitute one of the most characteristic classes of compounds in higher plants.

Many flavonoids are easily recognised as flower pigments but their occurrence is not restricted to flowers. They are found in all parts of plants. Flavonoids are also abundantly found in foods and beverages of plant origin, such as fruits, vegetables, tea, cocoa, and wine; hence they are termed as dietary flavonoids. Flavonoids have several subgroups, which include chalcones, flavones, flavonols and isoflavones. These subgroups have unique major sources. For example, onions and tea are major dietary sources of flavonols and flavones.

Flavonoids play a variety of biological activities in plants, animals and bacteria. In plants, flavonoids have long been known to be synthesised in particular sites and are responsible for the colour and aroma of flowers, and in fruits to attract pollinators and consequently fruit dispersion to help in seed and spore germination, and the growth and development of seedlings.

Flavonoids protect plants from different biotic and abiotic stresses and act as unique UV filters, function as signal molecules, allopathic compounds, phytoalexins, detoxifying agents and antimicrobial defensive compounds.



Flavonoids have roles against frost hardiness, drought resistance and may play a functional role in plant heat acclimatisation and freezing. Early advances in floral genetics were primarily due to mutation techniques making an impact on flavonoid derived flower colours.

This suggested and demonstrated that functional gene silencing in plants was associated with flavonoid biosynthesis. Flavonoids have been ascribed positive effects on human and animal health and the current interest is for disease therapy and chemoprevention. Currently there are about 6000 flavonoids that contribute to the colourful pigments of fruits, herbs, vegetables, and medicinal plants.

2. Virus isolation through host support, exactly what does this mean? What makes this product effective? Is it effective against the CoVid-19 virus?

Any virus needs a host to be able to grow and replicate itself. This host is normally another cellular organism like a plant or animal or human cell, or bacterial cell which contains an RNA or DNA configuration. The virus needs to attach itself to this host organism in order to be able to replicate. This attachment is very specific depending on the type of virus. Every virus is surrounded by a protective protein-like structure that also acts as food source before it attaches to a host. This food source has a limited lifespan therefore viruses cannot float *ad infinitum* without attaching to a host. Flavonoids have been studied against a wide range of DNA and RNA viruses. In general, flavonoids work by several mechanisms in “fighting” viruses. They can block attachment and entry of viruses into cells, interfere with or disturb various stages of viral replication processes or translation and polyprotein processing to prevent the release of the viruses to infect other cells. This is known as “virus isolation” or “failure to attach”. The virus does not find a source for replication and becomes isolated – leading to the demise of the virus.

We have sufficient scientific peer reviewed material confirming that at least one of the complex of flavonoids contained in Organic Fresh® actively destroys parts of the attachment mechanism or critical components of the protein layer around the virus, causing it to NOT be able to attach and replicate adequately – leading to its demise and destruction. Organic Fresh® does not kill – the virus is destroyed because its life support systems are destroyed by Organic Fresh®.

We have all the right supportive published scientific reporting that the mechanisms of action of the flavonoids included in Organic Fresh® significantly inhibits the ability of corona-type viruses to effectively attach to a host and replicate.

3. Who uses the product currently?

The product is currently used in different applications in the cosmetic industry, the food preservation industry and other small businesses where sanitation is important. There are also applications currently installed in walkways of buildings where application is done through larger mist sprays.



4. How long has the product been available?

The product has been available in different formulations since 2008.

5. Is the product made in SA?

Yes. The Bio Consulting manufactures the product concentrate and the ready to use product is manufactured in our own factory. The final bottling is done at different venues. We have a factory in Paarl.

6. Briefly what is the mechanism through which the product effectively performs its antiviral activity?

Organic Fresh® General Sanitiser acts through a process of cell wall intrusion, complexation of key cations and disruption of protein functioning. Through these mechanisms Organic Fresh® General Sanitiser effectively and efficiently suppresses various pathogenic cellular organisms such as bacteria, fungi and moulds, and non-cellular organisms such as viruses on all surface areas.

7. Is Organic Fresh® safe for humans, especially children, the elderly and animals?

Yes, it has been approved and certified by all the below institutions:

- Ceres approval for
- Ceres confirmation of non-chemical content by Eurofins (Germany)
- Confirmation of food safety from SA Dept of Health
- SANAS approved disinfectant fungicidal and bactericidal report

The Flavonoid range of products are well known for more than 14 years in the agriculture industry, focus in on the health of all crops. Focus has been put on the microbiome of all living creatures – from plants and animals to humans. The CERES certification explicitly states that the product is safe for use in an environment where humans and animals interact freely – like in an agricultural environment.

Experiential testing in various venues has indicated that Organic Fresh® can safely and effectively be applied through sanitising booths without any harmful, detrimental or hazardous effects. The product has no flashpoint and atomising the active components has a greatly beneficial and positive effect with external surface sanitising as well as the inhalation of the fog.

This is based on the research that suggests and confirms the beneficial health effects of flavonoids.

8. Will the product cause any harm should I breathe it in?

No, health benefits to exposed individuals whilst promoting a protective and restorative respiratory experience to the individual. The formulations can be absorbed through the skin and the mucus membranes of the body, nose, mouth and lungs, making it a very suitable carrier for the flavonoids to be absorbed in the bloodstream and as such reach the important infected areas in the respiratory channel which is directly affected by Covid – 19. The positive effect of flavonoids on the different aspects of human health have been extensively researched over an exceptionally long period.



This means that, even if there is no direct risk of infection the product still has distinct hygiene benefits for the individual when inhaling it. This is directly due to the strong beneficial impact of the active flavonoids in the product on the strengthening and improving of the health of the human cells they interact with.

Our own testing has, however, shown that the efficacy of the application of Organic Fresh® through sanitising booths is very closely related to a number of specific specs that play an important role in the optimization of surface contact and the availability of atomized flavonoids for inhalation.

These specs have been adopted by The BioConsulting (PTY) Ltd as the application standard for Organic Fresh® through spraying booths. These specs can be obtained through contacting The BioConsulting (PTY) Ltd.

#### 9. Alcohol Versus Non - Alcohol (organic) composition?

Our product is non-alcohol based because alcohol has distinct disadvantages in terms of its acceptability in sanitizing as we formulated it. It is harmful to the skin and has specific disadvantages as solvent for use in mist sprays. Over and above the fact that it damages the skin, the inhalation of alcohol has distinct disadvantages to human health. This has been extensively documented in the literature. The dangers of using alcohol in a mist spray are well known. The viscosity of alcohol is also not very conducive for use in mist sprays. People who inhale alcohol vapours get drunk very quickly, because the alcohol goes straight to the brain. Alcohol is highly flammable. Organic Fresh® is a water-based solution with absolutely no flashpoint.

#### 10. Is the product flammable?

With specific reference to underground mining, our product has NO flashpoint, is NOT flammable and thus is the perfect solution for underground mining environment and is effective above ground too. This is because it is non-alcohol based and non-chemical containing – substances that may cause flammability.

#### 11. What about the use of Chlorine?

The use of chlorine to spray in confined areas is also life threatening if not extremely well controlled at VERY LOW concentrations not exceeding 0.1 – 0.3 ppm. Dosages of 50 ppm as mentioned are deadly and can cause SEVERE human health issues, like pneumatic oedema and other profoundly serious lung diseases. These will then severely compromise the immunity of the individual and significantly increase the susceptibility to viral and other pathological infections.

Both chlorine and alcohol are implicated as being dangerous substances in the Health and Safety Regulations for Mines and are NOT used in the formulations of Organic Fresh®.



12. Do you have significant recommendations from Health Departments? WHO advise us to use alcohol-based Sanitizers? Have tests been done to prove this theory?

To start off with – there is a particularly important and distinct difference between sanitizers and disinfectants.

Disinfectants are formulated and produced to sterilize the areas where they are applied. That means they kill ALL organisms prevalent in the areas where applied. Sanitizers are formulated and developed to mostly sanitize the environment and surfaces it is used in from harmful organisms leaving beneficial organisms to flourish. In Organic Fresh® the combination of selected flavonoid and plant-based extracts in the formulation contain the active flavonoids that effectively kills harmful organisms. This fungicidal and bactericidal properties in Organic Fresh® are duly certified by leading international laboratories.

Earlier in this document we described that our product is non-alcohol based since we use 100% non-alcohol and non-chemical ingredients and production processes that have been certified by leading international laboratories. Organic Fresh® is not based on a strange theory – it is based on mainstream international research that has been conducted the past 80 years but has been largely ignored. There is currently ongoing research in leading global institutions on specific aspects and mechanisms of action entrenched and included in Organic Fresh®. It has a well-developed and credible scientific base from where it is developed.

13. Can we get documentation or an official letter stipulating that this product is effective in disinfecting/ sanitizing against the covid-19 virus especially to our employees and facilities?

No this is not possible due to our certifications and the fact that there are no medical tests to support such claims. The reality is that NO product exists that can be conclusively certified that it can kill CoVid-19 in normal everyday human use – internal or external. No such tests exist readily since it is a protractive and costly exercise. Infection mostly takes place via the mucus membranes in the eyes, mouth, nose and throat – after the virus has been introduced through some transfer activity, like the hands or mucus drops in the air due to sneezing or coughing of carrier individuals. From there the drive to wash hands. None of the alcohol-based products can be applied anywhere other than the hands. They are mostly harmful to humans when ingested. Organic Fresh® radically and distinctly differs from this in that it has been CERTIFIED to perform its sanitizing function ANYWHERE it meets harmful organisms. This INCLUDES the mouth and the nose and the airways to the lungs. Its natural beneficial action on human cells means that, even in the event of no infection it still has a POSITIVE EFFECT on the human cells it encounters. With or without infection it meets the criteria for beneficial mechanisms of action to benefit human hygiene.



14. Is Organic Fresh® a biocidal substance?

*Organic Fresh® is NOT a biocide since it does not meet the definitive description of what a biocide is. Organic Fresh® is a sophisticated complex of flavonoids and other botanical extracts focusing on the sanitation of contaminated environments. Although it destroys potentially pathogenic organisms, it is also professionally researched and hailed as being immensely powerful in its composition favouring the improvement and sustenance of the general health of the host cells where it makes contact.*

Where biocidal active substances are mostly chemical compounds, sometimes containing microorganisms (e.g. bacteria), Organic Fresh® contains NO micro-organisms or chemicals, and its ingredients and manufacturing processes have been CERES certified to meet the criteria set for human food safety. Organic Fresh® does also NOT contain any biocidal active substances or any other non-active co-formulants that ensure the effectiveness as well as the desired pH, viscosity, colour, odour, etc. of the final product.

Organic Fresh® is a carefully and professionally formulated sanitising agent that is focusing on skilfully employing the anti-bacterial, anti-fungal and anti-viral properties of a bouquet of plant based flavonoids and other botanical extracts in promoting a sanitised living environment whilst actively enhancing the general health of the individual exposed to its sanitising action. This is a unique mechanism of action clearly separating it from biocidal activity.