



OrganiSan H Organic Hand Sanitizer

OrganiSan H Organic Hand Sanitizer is a C4L Technology non- alcohol-based hand Sanitizer consisting of a carefully formulated compound consisting of unique C4L Technology flavonoids and extracts with extensively researched health, environment and food safety benefits, manufactured through CERES certified organic compliant processes¹.

Flavonoids against viruses

There are many studies on Flavonoid activity on a wide range of DNA and RNA viruses. In general, flavonoids work by several mechanisms. They can block attachment and entry of viruses into cells, interfere with various stages of viral replication processes or translate polyprotein processing to prevent the release of the viruses to infect other cells. Different flavonoids have been found to inhibit viral activity through various mechanisms, namely:

- Flavonoids binding to specific extracellular regions of the virus such as viral proteins present on the capsids.
- Flavonoids that prevent attachment or entry of the virus into host cells. In some cases, flavonoids can bind to virions and modify the virus structure. Though the virus can still internalize, the process of viral uncoating is stalled.
- Early-stage replication inhibitors.
- Transcription and translation blockers.
- Inhibition of late stages of maturation such as inhibition of assembly/packaging and release.
- Flavonoids that can inhibit viral infections by interfering with host factors that are required for successful infection or modulating the immune system to reduce the viral load.

Based on the mentioned antiviral mechanisms of action, flavonoids can be prophylactic inhibitors, therapeutic inhibitors or indirect inhibitors by interaction with the immune system.

The technology

OrganiSan H Organic Hand Sanitizer is a 100% natural Biocide formulated with botanical extracts. OrganiSan H Organic Hand Sanitizer acts through a process of cell wall intrusion, complexation of key cations and disruption of protein functioning. Several ingredients act as powerful wetting and penetrating agents to permeate outer cell defences, then transport other key ingredients to protein sites, thus disrupting normal functioning. Through these mechanisms OrganiSan H Organic Hand Sanitizer effectively and efficiently suppresses various pathogenic cellular organisms such as bacteria, fungi and moulds, and non-cellular organisms such as viruses. All ingredients are food safe. Rated up to the strength of a hospital grade disinfectant^{2,3} it is safe and nontoxic to humans yet a powerful germ killer.

Advantage of use

1. OrganiSan H Organic Hand Sanitizer can safely and effectively be applied as a hand Sanitizer in programmes aimed at improving the health and wellness of people and populations.
2. OrganiSan H Organic Hand Sanitizer is an easy to use product suitable for:
 - Sanitizer spraying technology
 - Hand dispensing equipment

Key value features of OrganiSan H Organic Hand Sanitizer include:

- ❖ Highly active and effective against a broad spectrum of micro-organisms
- ❖ Non-corrosive and, safe non-toxic to humans
- ❖ Remains active in the presence of organic matter
- ❖ Biodegradable
- ❖ Broad pH activity
- ❖ Environment and marine safe
- ❖ Cost effective
- ❖ Safe to use in food preparation areas

*Documentation available on request.

¹ CERES GmbH Document No: 90205-I.

² MERIEUX NutriSciences, SANAS testing laboratory Report number CT 156553/19 - 01

³ MERIEUX NutriSciences, SANAS testing laboratory Report number CT 156553/19 - 02



Competitive advantage (this could be combined with Advantages above)

Competitive advantages of OrganiSan H Organic Hand Sanitizer:

* *carefully formulated compound of unique C4L Technology flavonoids and extracts*

- effective and efficient alternative product to a whole range of quaternary based products, with beneficial carbon footprint in manufacturing, application and preparation of human health products.
- OrganiSan H Organic Hand Sanitizer is non-toxic to humans and supports a healthy immune system.
- This makes OrganiSan H Organic Hand Sanitizer a globally unique product to apply. Key Application
- Areas for OrganiSan H Organic Hand Sanitizer include:
 - ❖ Child & Old Age Care Centres
 - ❖ Home hygiene
 - ❖ Commercial Cleaning
 - ❖ Health Industry
 - ❖ Food hygiene, manufacturing and preparation
 - ❖ Water Treatment
 - ❖ Food preservation

Organic Fresh® Dermural Hand Sanitizer vs alcohol-based Sanitizers

- OrganiSan H Organic Hand Sanitizer consists wholly of a *carefully formulated compound of unique C4L Technology flavonoids and extracts*. Antimicrobial activity is not alcohol based.
- OrganiSan H Organic Hand Sanitizer does not contain any chemically extracted ingredients hence the CERES organic certification.
- The alcohol used as a solvent in hand Sanitizers has a detrimental effect on the fat contained in the sub-peritoneum layer of the skin.
- Tests by FDA and European laboratories report no significant difference in the effectivity of OrganiSan H Organic Hand Sanitizer based hand Sanitizers vs alcohol-based hand Sanitizers. In terms of cost-to-benefit analysis, the use of alcohol-based Sanitizers is significantly less cost effective.
- An important aspect about alcohol-based hand sanitizers is that they contain about 65 - 80 percent ethyl alcohol (pure alcohol). Significant amounts of this is absorbed into the skin – with the detrimental effect on the skin and the subcutaneous layers of the skin. Many alcohol-based hand sanitizers also contain isopropyl alcohol (rubbing alcohol) which is a petrochemical that is a known neurotoxin. It is also absorbed through the skin and is toxic even in small quantities.
- Due to the high alcohol content of alcohol-based sanitizers, flammability is a significant safety hazard to consumers.
- There are significant social barriers that have developed against the use of alcohol-based products, whether consumptive or non-consumptive.
- The possibility of ethanol absorption through the skin presents serious religious and cultural problems. High alcohol content products cannot be Halal certified.
- Ingredients: Purified water, Citrus Bioflavonoids & Spice Extract compound, Terpenes, vitamin C, and Namibian myrrh.