

SomGuard™
Based on Silver Nano Technology
Universal Disinfectant & Biocide

Introducing SomGuard™

SomGuard™ is an eco friendly, non toxic, universal disinfectant and biocide. It eliminates all types of pathogenic yeasts, moulds, fungi amoeba, bacteria, and virus.

SomGuard™ as a biocide and universal disinfectant has multiple applications in sectors as varied as food processing , aquaculture , agriculture , floriculture, poultry, food & beverages , pharmaceuticals , hospitals , hospitality and many more sectors where disinfection and microbe load elimination plays an integral role for quality output in terms of a product / service.

SomGuard™ is prepared by a unique process in which nano Silver ions and Hydrogen Peroxide re mixed, bonded and complexed to give an oligo-dynamic, stable and long lasting effect.

SomGuard™ is completely bio-degradable and quickly eliminates micro-organisms thereby making it a safe, convenient and easy to use product that leaves no residues.

A Historical Brief

Hippocrates, the father of modern medicine, wrote that silver had beneficial healing and anti-disease properties. The anti microbial effect of silver has been known and applied since the early 1800's. There were approximately four dozen different silver compounds in the market by 1940 being used to treat every known infectious disease owing to its biocidal action.

Louis Jacque Thenard – a French chemist discovered hydrogen peroxide in 1818. Hydrogen peroxide has been reported to be first used in Eastern Europe in early 1950's for drinking water disinfection owing to the biocidal / germicidal action exhibited by it.

Fields of Application

- Agriculture
- Animal farms
- Aquaculture
- Bakeries
- Blood banks
- Bottling plants
- Breweries
- Bulk Drug Units

- Consumer goods
- Cooling towers and air-conditioning plants
- Cosmetics industry
- Dentistry
- Diagnostic Labs
- Distilleries
- Drinking water
- Fish and Meat Processing
- Food and beverage industry
- Formulation units
- Health Care
- Hospitals and Clinics
- Flower industry
- Ice cream manufacturing units
- Linen sterilization
- Livestock farms and fish docks
- Metal Polishing
- Microbiology
- Milk processing plants
- Mouthwashes
- Parenteral preparations
- Pharmaceutical industry
- Post harvest treatment
- Poultry Farms
- Public Toilets, Bath Rooms
- Sauna pools
- Stables
- Swimming pools
- Wall and Floor disinfection
- Waste Water Treatment
- Zoo and many more ...

Mode of Action

SomGuard™ is a unique multi component formulation based on nano silver ions and Hydrogen Peroxide. The combination of these two elements has a synergistic effect in killing all forms of microbes

SomGuard™ effectively disinfects through its two pronged approach by effectively utilizing nano silver ions and hydrogen peroxide (H₂O₂) as its main 'action' components.

Hydrogen peroxide splits to release oxygen which attacks the cell walls of microbes upon contact

Oxygen reacts with the cell wall molecules of the microbes and denatures and destroys the microbial cell wall.

Nano silver ions bind to the molecular components of the microbial cell and further deactivate the metabolic system and inhibit further reproduction of the microbe eventually killing it.

Hydrogen peroxide later breaks down into water and oxygen ($H_2O_2 = H_2O + O_2$) thus causing no residual toxicity.

Traces of silver remain on the sterilized surface that are not visible and non-toxic but actively check any further microbial resurgence and germination.

Method of Application

Topical Application: Mix 10 ml of SomGuard™ in 1 L of water and spray on the target area

Swabbing : Dilute 10 ml of SomGuard™ in 1 L of water and swab the target area to be disinfected.

Fogging : SomGuard™ @ 25 ml / L of water can be effectively used for fumigation and fogging for elimination of air borne bacteria , fungi and virus.

Time required for disinfection of the room depends on total volume of the room. Spraying of SomGuard™ doesn't cause any side effects to eyes, nose and skin, unlike conventionally used fumigants.

The recommended ULV fogger forms a very fine mist which allows the formulation to be suspended in the atmosphere for a longer period of time ensuring a 100% kill rate on all air-borne microbes.

All open electrical points such as plug points, bulb holders must be covered by an adhesive cellophane tape because the nascent oxygen on coming in contact with live wire / electricity may be inflammavle.

Bio Hazardous Material disposal: Make 0.5 – 1% solution of SomGuard™ in water . All disposable surgical instruments, syringes, blood bags, bottles, catheters, etc. can be disinfected by dipping or spraying and made ready for disposal. Cotton wastes, wound dressing and similar items can be disinfected by spraying.

Field Debris disinfection: Collect all pruned plant parts and disinfect by using 0.5 – 1.0 % solution of SomGuard™ in water.

Hand disinfection: Make 0.1% solution of SomGuard™, dip hand in this solution. Do not wash. Hands are disinfected as soon as hands dry.

Drinking water disinfection for Poultry / Animals : Dilute 1 ml of SomGuard™ in 10 L of drinking water for poultry and animals.

Target Organisms

All types of microbes – yeasts, moulds, fungi amoeba, bacteria, and virus Some of the targets are listed under and may not be limited to the same :

- Amoebae
- Bacillus-Species
- Bacteriophage
- Cholera
- ECBO viruses
- Fungi
- Gram+, gram- bacteria
- Viruses
- Yeasts and mould

Compatibility

SomGuard™ is compatible with all agricultural chemicals

SomGuard™ should not be used along with microbial BioPesticides and BioFertilizers as it is a biocide and will inactivate / kill the active beneficial microbes contained in the BioPesticide/ BioFertilizer

Shelf Life

SomGuard™ is stable for a period of 12 months from the date of manufacturing.

Cautions for handling and use of product

1. Avoid inhalation and skin contact while diluting as there could be spillage / splashes of the product
2. Do not eat / drink / smoke during application.
3. Direct incidence of SomGuard™ may cause irritation and therefore it is recommended that the operator should use protective gear viz gloves, apron, mask, eye gear and hood.

Symptoms and Antidotes

Symptoms: Use of SomGuard™ is known to have no side effects. However, occasional symptoms include head ache and nausea.

Antidote: In the case of ingestion: symptomatic treatment is advised. In the case of contact with Eyes: Flush with water liberally for 20 minutes. In case of Skin contact, wash the affected area with plenty of water and soap.

Citations

There are many citations in public domain on effectiveness of Silver and Hydrogen Peroxide as a disinfectant and Biocide

Commitment to Nature

- SomGuard™ can be used as an effective component in IPM programmes, disinfection programmes thereby leading to a reduction in use of chemical pesticides/ fungicides/fumigants and creating a safer environment.
- SomGuard™ does not lead to residue problems and doesn't cause resistance or resurgence problems.

Benefits from SomGuard™

- SomGuard™ effectively kills all types of micro organisms including virus and disinfects the target surface area.
- Pathogenic microbe load reduction leads to improved plant health and thereby increased crop productivity.
- Bio degradable and does not affect the chemistry or quality of the product treated
- Does not alter the pH, taste, colour or smell of treated product
- Does not create any odour
- Does not form chemical compounds with other chemicals.
- Effective in wide water temperatures ranging from 0°C - 100°C
- Free from Chlorine, carcinogenic or mutagenic effect
- Free from danger of microbial resistance
- No need to use combinations of several disinfectants or to choose strain specific disinfectants
- No neutralisation necessary after use
- Non carcinogenic / Non Corrosive / Non Inflammable
- Parameters like Hardness, Salinity, pH cannot impair the efficiency of SomGuard™
- Prevents recontamination or reoccurrence.