



How Silver Nano Particles work

A number of mechanisms have been observed: decrease in silver Nano particles and Ag-NPs accumulation, conversion of Nano silver to its metallic form and increase in anaerobic respiration in Ag-NPs exposed bacteria.

Aq-NPs breaking through the cell wall



DNA of the microbe to stop cell replication

solution.

Ag-NPs disrupting the respiration of the microbe

The seateral died
when Bacterial touch nano silver

Nano Silver Particles

Antibiotic can only attack one state e.g. (A or B).

Bacteria have "adapted" themselves to deal with this one site attack and have developed resistance.

Cell wall

Cell membrance

DNA

RNA

RNA

Ribosomes (protein synthesis)

Silver-NP acts as contacticidal. Silver-NP can attack anywhere around the bacterial cell wall, so that the bacteria cannot "adapt" and is unlikely to develop resistance.

PROTECSIL `NPs is an eco-friendly, non-hazardous, multipurpose broad spectrum disinfectant, biocide and used in poultry, aqua and dairy farms. It effectively kills all types of pathogenic microorganisms including viral cells, prevents the resistance build up in Microbes.

Silver nanoparticles (Ag-NPs) with its powerful oligodynamic and catalytic effect, is combined with stabilizers to form a complex







Target Organisms:

All types of microbes – Yeasts, Moulds, Fungi, Amoeba, Protozova, Bacteria, and virus some of the targets are listed under and may not be limited to the same:

Bacillus-Species (as Bacillus Anthracis, Anthrax), Bacterophagus, Fowl Cholera, ECBO viruses (F.

Herpesviridae), Hepatitis B, Influenza A, Legionnaires Disease, Listeria Monocytogenes, Methicillin-resistant Staphylococcus aureus (MRSA), Mycoderins, Newcastle Disease (ND), Sporogenesis, Vaccinal virus (F. Poxviridae), Vibrio parahaemolytus, Vancoimycin-resistant Enterococci (VRE), among other common poultry and livestock disease.

Benefits

- * Protective and Natural antibiotic that acts as an effective germicide, without any side effects.
- * Natural, Biodegradable and does not affect the chemistry or quality of the product treated.
- * Effective against microbial Bio-films. Act as very good de-odorizer
- * Does not alter the pH, taste, colour or smell of treated product.
- * Effective in wide water temperatures ranging from 0°c-95°c.
- * Free from Chlorine, carcinogenic or mutagenic effect and eco-friendly & user-friendly.

Method of Application:

Topical Application: To prevent Virus, Bacteria & Fungus, mix 2.5-5 ml of P **PROTECSIL** `NPs in 1 L of water and spray in and around the farm and on birds once a day. Spraying in presence of birds 3ml/lt of water and in empty shed 5ml/lt of water

Spraying of **PROTECSIL `NPs doesn't cause any side effects to eyes, nose and skin, unlike conventionally used fumigants.

Swabbing: Dilute 10 ml of PROTECSIL `NPs in 1 L of water and swab the target area to be disinfected.

Fogging: Dilute 5-10 ml of **PROTECSIL `NPs** in 1 L water can be effectively used for fumigation and fogging for elimination of air borne bacteria, fungi and virus.

Shelf Life: is stable for a period of 24 months from the date of manufacturing.

A Product of:



EURO Certification (UK)Ltd.

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LD₅₀ 2854 mg/kg of animal body weight. The silver level is well below 180 mcg/person/day permitted by WHO and is safe for animal life.

