Virukill®

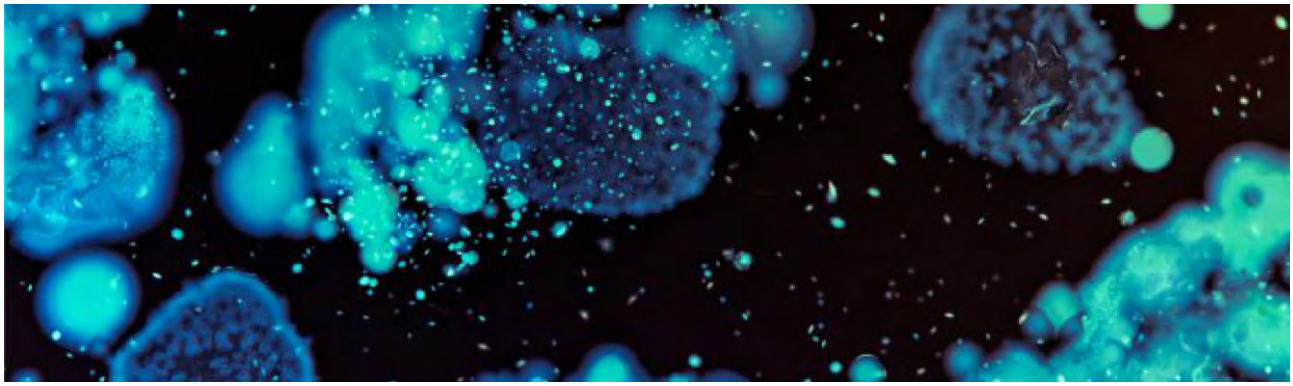
# DISINFECTANT AEROSOL FOGGER

**NRCS Reg. No: NRCS/8054/243642/535**




**ICA International Chemicals contact details: +27-21-886-9812 | www.icaonline.co.za**

# A BREAKTHROUGH IN THE CONTROL OF HARMFUL AND UNWANTED MICROORGANISMS



Building on the tried and tested efficacy of ***Virukill®*** (NRCS Reg. No: NRCS/8054/243642/535) for the control of all pathogenic micro-organisms, this new ***Virukill® Disinfectant Aerosol Fogger*** will greatly assist in the control of harmful micro-organisms, wherever they occur, even in difficult to reach areas. Highly effective against a wide range of bacterial pathogens such as *Listeria monocytogenes*, various *Vibrio* species, *Camphylobacter* species, *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, various species of *Bacillus* and *Clostridium* (both vegetative cells as well as endospores), various species of *Salmonella* and many others.

## WHAT IS THE VIRUKILL® DISINFECTANT AEROSOL FOGGER?

The ***Virukill® Disinfectant Aerosol Fogger*** is a ready-to-use dilution of the highly effective disinfectant, ***Virukill®***, in a pressurised can, which, once triggered will completely empty, resulting in a very fine aerosol mist which can be used to disinfect any closed area of approximately 35 $m^3$ per aerosol can. Examples of such closed areas include (but not limited to) the inside of empty trucks transporting food stuff or animals and birds such as day-old chicks, closed rooms in hatcheries, food processing areas, laboratories, incubators, setters, walk-in cool rooms, animal rearing facilities (in combination with a full ***Virukill®*** continual disinfection program) abattoirs, veterinary consulting rooms, veterinary kennels, operating theaters and many more.

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## ADVANTAGES OF VIRUKILL® – THE ACTIVE IN THE VIRUKILL® DISINFECTANT AEROSOL FOGGER

***Virukill®*** has been tested against a wide range of microbial pathogens and found to be highly effective even against very difficult to kill pathogens such as fungal spores, bacterial endospores and even naked viruses such as *Caine Parvovirus* and *Infectious Bursal disease virus*. ***Virukill®*** has been found to be highly effective against all bacterial pathogens including *Listeria monocytogenes*, various *Vibrio* species, *Camphylobacter* species, *Escherichia coli*, *Staphylococcus aureus, Pseudomonas aeruginosa*, various species of *Bacillus* and *Clostridium* (both vegetative cells as well as endospores) various species of *Salmonella* and many others (a full list of micro-organism against which ***Virukill®*** has been tested is available on request).

***Virukill®*** has been tested and found to be very effective against various fungal species including *Aspergillus niger* and *Aspergillus fumigates*, both of which are problematic in poultry hatchery environments.

***Virukill®*** has been found to be non-corrosive to various metals, plastics, rubber and other surfaces.

***Virukill®*** has been found to be highly stable when diluted.

***Virukill®*** has been proven to be less prone to the development of resistance than other disinfectants.

***Virukill®*** has shown a strong residual effect against bacterial pathogens.

***Virukill®*** has been shown to kill bacteria with only a 10 second contact time.

## EFFICACY TESTS OF VIRUKILL® DISINFECTANT AEROSOL FOGGER

In independent laboratory tests, the efficacy of ***Virukill® Disinfectant Aerosol Fogger*** has been demonstrated at low temperatures (in a walk-in cold room) and at high temperatures (in a walk-in incubator at 37 ºC). High levels of efficacy were seen under both conditions (See Table 1 and Fig 1). Very limited bacterial growth was seen on the disinfected surfaces even after 5 days. ***Virukill® Disinfectant Aerosol Fogger*** is highly effective against various pathogenic micro-organisms (Table 2).

**Table 1**. Bacterial counts before and after disinfection with the ***Virukill® Disinfectant Aerosol Fogger*** in a walk-in cold room and walk-in incubator are treated.

| Area Treated | Mean bacterial counts in cfu* per $cm^2$ (n = 10) | | | |
|---|---|---|---|---|
| | Before | 3 hours post treatment | 24 hours post treatment | 5 days post treatment |
| **Walk-in cold room** | 21.4 | 0.9 | 0.6 | 0.5 |
| **Walk-in incubator** | 31.6 | 1.4 | 0.7 | 0.7 |

* cfu = colony forming unit

**Fig 1**. Example of contact plates collected before and after treatment with the ***Virukill® Disinfectant Aerosol Fogger.***

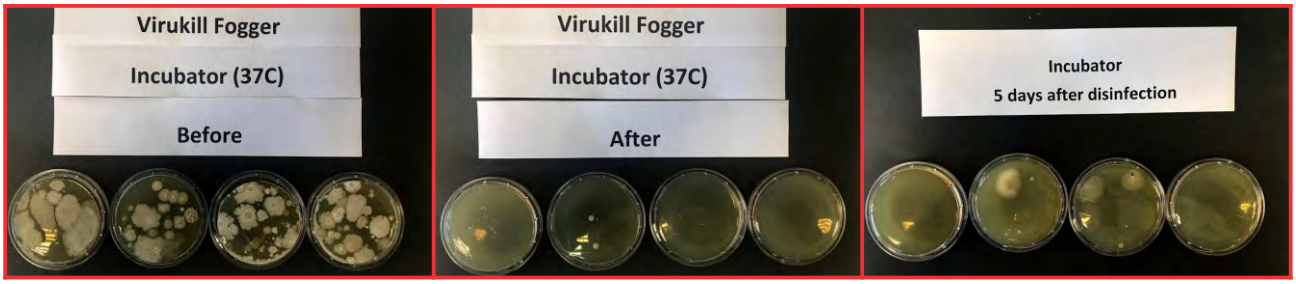



**Table 2:** Efficacy tests performed on various pathogenic micro-organisms tested with a 5 min contact time collected from a 400 $cm^2$ surface area. All bacterial counts are in colony forming units (cfu)/$cm^2$

| Organism | Microbial inoculum in cfu/$cm^2$ | Mocrobial count cfu/400$cm^2$ after inoculation (calculated) | Microbial count on control surface | Microbial count after treatment | Percentage kill rate |
|---|---|---|---|---|---|
| *Escherichia coli* | 86.5 | 34 600 | TMTC* | 0 | 99.999% |
| *Pseudomonas aeruginosa* | 306.25 | 39 800 | TMTC | 0 | 99.999% |
| *Staphylococcus aureus* | 127.3 | 50 920 | TMTC | 0 | 99.999% |
| *Enterococcus hirae* | 112.7 | 45 080 | TMTC | 0 | 99.999% |
| *Candida albicans* | 21.2 | 8 480 | TMTC | 0 | 99.999% |
| *Aspergillus brasilliensis* | 25.5 | 10 200 | TMTC | 0 | 99.999% |

**TMTC = too many to count

# PRECAUTIONS

## FOR MORE INFORMATION CONSULT SAFETY DATA SHEET

1. Store locked up in a well-ventilated, dry place away from flammable materials, food products, and packaging material.
2. Protect from sunlight and intense light. Do not store at temperatures exceeding 30 °C.
3. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
4. Do not spray on an open flame or other ignition source.
5. Do not pierce or burn, even after use.
6. Do not breathe aerosol spray.
7. Wash hands and face thoroughly after handling.
8. Wear protective gloves, protective clothing, goggles and face protection. Avoid skin and eye contact with product and fumes.
9. Wear respiratory protection when entering treated area before aerosol spray deposit has settled.
10. **Re-entry interval**: Do not enter treated area until aerosol spray deposit has settled down/dried unless wearing the necessary protective clothing.

# DIRECTIONS FOR USE

## USE ONLY AS DIRECTED

1. Shake container before use.
2. Remove humans/animals/produce/plants/feedstuff and fodder from space to be treated.
3. Highly flammable: Put off all electronics and extinguish all flames before use.
4. Protect food utensils and packaging materials from direct exposure (cover with paper/plastic sheet).
5. Pre-clean dirty surfaces with an appropriate detergent, rinse and dry. Efficacy of disinfectant will be compromised if surfaces are soiled.
6. Place the canister on a solid surface in centre of area to be treated, or evenly distribute canisters if more than one is required, open cupboards, close all windows and doors, seal any openings. ***Virukill® Disinfectant Aerosol Fogger*** can be placed on a raised surface if area is higher than 4 m.
7. Activate the ***Virukill® Disinfectant Aerosol Fogger*** and leave the area immediately.
8. Allow 60 min for the aerosol to disperse and settle before re-entry.
9. Re-introduce animals/produce/plants only after fumes have cleared.
10. Thoroughly rinse or wash treated linen and clothing that will have skin contact during use, to remove disinfectant residues.
11. One canister will disinfect ~35 $m^3$ from fungi and bacteria, including spores.




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VISUAL PROJECTS