

WHAT IS ZOONO® AND HOW DOES IT WORK?



The New Zealand based Zoono® Group sells internationally and now offers their products in Canada for your wellbeing.

Zoono® offers a non-toxic, innovative technology that addresses a broad range of pathogens via a mechanical process. All Zoono® products, when applied and left to dry, provide an invisible barrier to protect against bacteria, viruses, fungi, and algae.

The Zoono® line-up has been clinically tested in independent, accredited laboratories internationally and proven to protect against a broad spectrum of more than 100 pathogens, including:

- *MRSA (Superbug)*
- *E. Coli*
- *H1N1*
- *Swine Flu*
- *Listeria*
- *TB*
- *Stachybotrys*
- *Norovirus*

If it's susceptible to Lysis,
then Zoono® will deal with it!

ZOONO®

Authorized Agent:

 SUZOHAPP

A New Era in Antimicrobial Solutions

ZOONO®

A New Era in Antimicrobial Solutions



ZOONO® BODY HAND SANITIZER



Provides a protective barrier for long-lasting germ defense.

Key Features

- Active for up to 24 hours
- Protects against a plethora of germs (bacteria, viruses, mould, fungi)
- Remains active after normal hand washing
- Alcohol-Free
- Non-drying / Gentle on hands
- Non-toxic for humans and animals
- Helps prevent superbugs
- Non-staining
- Odourless
- Safe to handle / Safe to store



Up to 24 hours protection after **HAND** application.

Sizes Available:
50 ml, 150 ml, & 1 Gallon

ZOONO® MICROBE SHIELD



The Microbe Shield, used after cleaning and let to dry provides up to 30 days of protection.

Key Features

- Active for up to 30 days
- Kills 99.99% of Germs
- Non-Toxic for humans and animals
- Alcohol-Free
- Won't wash off with normal cleaning
- Helps prevent superbugs
- Non-staining / Non-leaching
- Suitable for wide range of surfaces
- Food safe / Environmentally safe
- Safe to handle / Safe to store
- Does not require mixing



Up to 30 days protection after **SURFACE** application.

Sizes Available:
250 ml & 1 Gallon Bottles

A New Era in Antimicrobial Solutions

WHY ZOONO® IS BETTER

Safety combined with long lasting protection is the Zoono® Difference.

Key Features

Zoono® Lasts Longer Than Chemical and Alcohol Based Products

Chemical and alcohol based sanitizers are only effective while they are wet. As such, they have no residual protection and hands can become re-contaminated upon touching the next contaminated surface. In contrast, the germ defending properties of a single application of Zoono® lasts for up to 24hrs on skin, and up to 30 days on surfaces.

Zoono® Can't Result in Cell Mutations

Unlike other sanitizers, Zoono® does not kill bacteria by poisoning. As such, there is no possibility of bacteria building up any immunity (no super-bugs).

Zoono® is Safe to Use / Handle

Zoono® has numerous approvals and registrations from over 40 territories / countries and is safe for humans and animals. It has a similar "toxicity" rating to Vitamin C, and unlike chemical and alcohol based products, Zoono® is non-flammable and safe to store.

Zoono® is Environmentally Friendly

Zoono® is made from raw organic compounds. There is no harm to drains / waterways if Zoono® enters the system.



Zoono Surface Sanitizer

FDA & EPA Approved & Health Canada Authorized

What is Zoono

Invented in New Zealand and now **manufactured in United States**, Zoono technology has been used for over 10 years by well known trusted companies across a range of industries including manufacturing, medicine, science, hospitality, catering, agriculture, finance, IT, entertainment, transport, child care and livestock.

Laboratory Tested

Laboratory tests conducted by Zoono Group on its Z-71 Microbe Shield surface sanitizer have confirmed the product to be **more than 99.99% effective against coronavirus, or COVID-19**. Further third party, independent laboratory tests undertaken against COVID-19 have also showed that Zoono's Z-71 Microbe Shield (the same Zoono technology used in Zoono hand sanitizer) is **> 99.99% effective against COVID-19**. The product sanitizes, killing the virus and the **World Health Organization (WHO)** has called it nearly "Perfect Disinfectant".



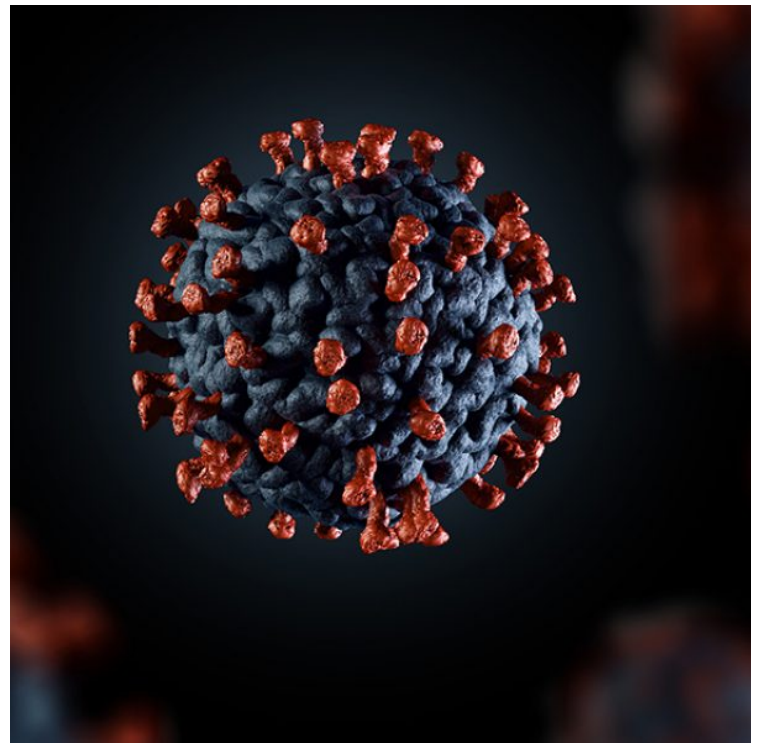
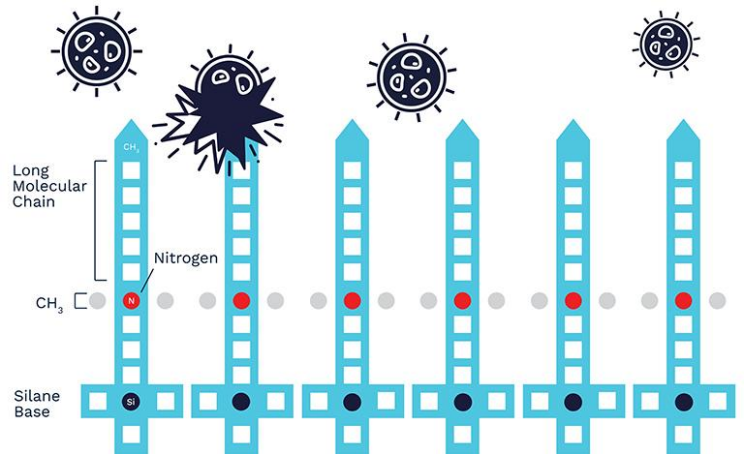
Z-71
TECHNOLOGY

Zoono Surface Sanitizer

FDA & EPA Approved & Health Canada Authorized

Zoono is colourless, odourless, non-leaching, environmentally safe, non-corrosive and whilst completely gentle for humans and animals, Zoono Z-71 Microbe Shield is deadly for a wide range of bacteria, viruses and fungi. Zoono Z-71 Microbe Shield is water-based and does not contain alcohol. When applied to a surface, Zoono leaves behind a mono-molecular layer that permanently bonds to the surface. The product contains a molecule that, once dried and hardened, creates a surface of microscopic pins and needles that can pierce and destroy harmful organisms for between 30 to 60 days after only one application.

Traditional liquid disinfectants only work when the surface is wet, once the disinfectant is wiped off or dried it is no longer capable of killing any harmful microorganisms that recontaminate that surface; in fact, the surface can become contaminated to the same levels as before disinfection within 1 – 2 hours. **Zoono helps to flatten the curve.**



Zoono Surface Sanitizer

FDA & EPA Approved & Health Canada Authorized

Can be applied anywhere

The applications for this product are endless and can be used in spaces such as guest rooms, bathrooms, staff areas, elevators, casino floors, convention spaces, and theater areas just to name a few. Zoono can be applied by electrostatic spraying or fogging to protect the entire room and contents or can be wiped or sprayed on items such as gaming tables and machines, chairs, chips, or any surface where harmful microorganisms may come into contact. Zoono bonds safely with almost any surface.

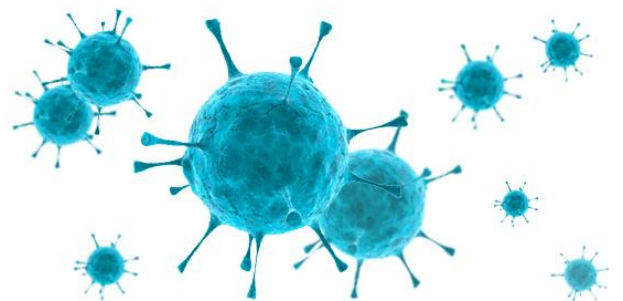
Safety and Savings

Routine cleaning can continue and does not disrupt the Zoono molecule or its antimicrobial activity. Zoono creates a base of protection that will allow your staff to return to a more normal cleaning schedule significantly **reducing labour costs, material costs and operation disruptions** due to cleaning.



How about your clothes?

Zoono can also be added to your laundry to coat employee uniforms, making them an anti-microbial barrier all day long. This can be done at the establishment or at home.

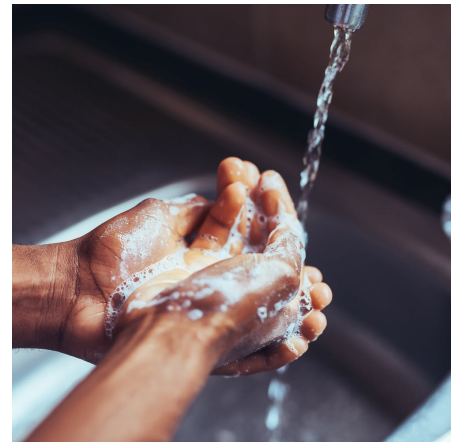


Zoono GermFree24 Hand Sanitizer

FDA & EPA Approved & Health Canada Authorized

Zoono GermFree24 Hand Sanitizer can be dispensed at stations that can be set up at entrances, giving **guests and staff 24 hours of protection**, providing them and extra feeling of safety and security while in your establishment and even after they depart. Spray GermFree24 directly on to the hands until the hands are moistened. Rub hands together to dry. On application **hands feel silky and moisturized** without leaving a visible film or coating.

A single application of GermFree24 will act **like a glove**, providing an invisible bond to the skin for 24 hours without the need for reapplication. GermFree24 does not rub off and **will remain active on the skin's surface for up to 10 wash / dry cycles** using a regular towel. We recommend that normal hand hygiene is practiced when using GermFree24 to ensure hands are kept clean.



GermFree24 **will not stain clothing nor will it stain the skin**. Unlike other hand sanitizers that contain up to 70% alcohol and chap the hands and dry the skin. Upon application, Zoono GermFree24 leaves hands soft and moisturized. **Small 50 ml bottles can also be provided in guest rooms or VIP areas.**



Zoono Surface Sanitizer & GermFree24 Hand Sanitizer

Key Features

Microbe Shield

Active for up to 30 days so application is therefore required less often

Kills 99.99% of Germs, Bacteria & Viruses
Non-Toxic for humans and animals (same toxicity level as Vitamin C)

Alcohol-Free

Routine cleaning can continue and does not disrupt the Zoono

Replaces the need for dangerous poisons, chemicals and alcohol in cleaning

Odor eliminator/deodorizer

Non-staining / Non-leaching

Colourless / Odourless / Non-corrosive

Suitable for wide range of surfaces including glass, metal, fabrics, plastics

Food safe / Environmentally safe / Non-flammable

Safe to handle / Safe to store

Allows for application over entire rooms and contents

GermFree24

Active for up to 24 hours

Protects against a plethora of germs, bacteria, mould, fungi, viruses

Remains active after normal hand washing
Alcohol-Free

Non-drying / Gentle on hands

Non-toxic for humans and animals

Non-staining

Odourless

Safe to handle / Safe to store



FACT SHEET

GermFree24 – World Health Organization Guidelines

The query is sometimes raised whether Zoono's Hand Sanitising product GermFree24, meets the World Health Organisation (WHO) Guidelines.

This Fact Sheet is based on the WHO Guidelines On Hand Hygiene [ISBN 978 92 4 159790 6 \(NLM classification: WB 300 - published by the WHO in 2009\)](#) and Test Results conducted under Standard EN1500 by Abbott Analytical in Wirral, UK, in September 2009, against GermFree24.

On pages 25 and 26 of the WHO Guideline, it describes the methodology to be adopted when evaluating hand sanitisers for "surgical hand preparation." In the section covering Hand Rubs (covered by the Standard EN1500, it states (in part)... "For hand rubs (EN1500), the main acceptable reduction with a test formulation shall not be significantly inferior to that with the reference alcohol based hand rub (isopropyl alcohol or isopropanol 60% volume)."

GermFree24 was evaluated against the same Standard EN1500 by Abbott Analytical (Wirral, UK) in September 2009.

In the Summary of these Test Results, D C Watson of Abbott Analytical advised (in part):
GermFree24, when used neat as received can be considered a suitable hygienic hand rub when tested under the procedures described above, giving significantly better reduction in bacterial numbers.

Therefore, GermFree24 not only met the EN1500 Standard but actually exceeded them (by giving "significantly better reduction in bacterial numbers".

Summary:

1. World Health Organisation uses EN1500 for the evaluation of Hand Sanitisers (hand rubs) used in surgical hand preparation.
2. GermFree24 has been tested against the same EN1500 Standards and confirmed to have a "significantly better reduction in bacterial numbers" than the evaluation product(s).
3. GermFree24 has been successfully tested against numerous pathogens – for a full list, please visit the Zoono website (details below).
4. Postscript: In July 2010, GermFree24 was successfully tested against H1N1 (Swine Flu) – recording a 99.99% reduction in activity after 60 seconds.

FACT SHEET

Zoono Tests Successfully Against Coronavirus COVID-19

Zoono Group Limited (ASX: ZNO) is pleased to advise that it has today received the report for the laboratory tests undertaken against COVID-19. The results show that Zoono's Z-71 Microbe Shield (the same Zoono technology used in Zoono hand sanitiser) is > 99.99% effective against COVID-19.

COVID-19 has become a global concern, in particular as it has been shown to survive on surfaces for up to 9 days. Zoono products have been successfully tested against a variety of pathogens for up to 30 days on surfaces and 24 hours on hands.

Whilst Zoono had been previously tested against bovine coronavirus (the nominated surrogate for MERS), this latest strain required new testing.

Two separate tests were completed to EN Standard 14476:2013+A2:2019. The first was against Vaccinia; sometimes referred to as the 'mother ship' of double enveloped viruses (that are particularly hard to inactivate), with the subsequent test against the nominated (and globally accepted) surrogate for COVID-19; feline coronavirus.

EN14476 is the European Standard that applies to products within the medical area including hygienic hand rubs, hygienic hand wash, instrument disinfection by immersion, surface disinfection by wiping, spraying, flooding or other means.

RESULTS:

The test against Vaccinia confirmed efficacy of > 4Log (greater than 99.99% efficacy) for Zoono Z-71 Microbe Shield (the same Zoono technology used in Zoono Hand Sanitiser).

The second test against the COVID-19 surrogate, feline coronavirus, confirmed efficacy at 4.33Log (greater than 99.99% efficacy).

The members of the family Coronaviridae are enveloped and have positive sense RNA genome. Coronaviruses have a distinct morphology with an outer 'corona' of embedded envelope spikes. These viruses cause a broad spectrum of animal and human disease and are particularly difficult to inactivate.

Zoono is very pleased with the results which further demonstrates the ability of the Zoono technology to be part of the solution to prevent and protect against the spread of the COVID-19 Virus.

Zoono Group Limited, 31 Hannigan Drive, St Johns, Auckland 1072, New Zealand. www.zoono.com



Frequently Asked Questions

Will Zoono remain effective even after many applications, e.g. applying once every 2-3 weeks over a period of a year?

Yes. Repeated applications of Zoono Z-71 will not diminish the product's activity or efficacy.

Is Zoono Z-71 'Food Safe'?

Yes. Zoono Z-71 has a New Zealand Food Safety Authority (NZFSA) C-22 Approval plus further approvals from Asure Quality (NZ) and AQIS (Australia).

Will Zoono Z-71 adhere to itself over an extended period of time?

The Zoono application is self-limiting and therefore Zoono will not adhere to itself on a treated surface.

Does Zoono maintain it's efficacy and stability in humid and in hot climates?

Yes. Zoono's efficacy and stability are maintained when used in humid climates. There is no lessening of the pathogenic activity of the Zoono treated surfaces with increasing temperatures and it remains stable >200°C.

How do I use the Zoono Hand Sanitiser GermFree24 ?

Spray GermFree24 directly on to the hands until the hands are moistened. Rub hands together to dry.

Does Zoono GermFree24 really remain effective for 24 hours?

Once GermFree24 has dried, the one single application will provide protection for 24 hours or up to 10 washings.

Do you have Test Results for your products?

Yes. All Zoono products have undergone testing at recognised Laboratories around the world.

How will my hands feel once I have applied GermFree24?

On application hands feel silky and moisturised without leaving a visible film or coating. A single application of GermFree24 will act like a glove, providing an invisible bond to the skin for 24 hours without the need for reapplication.

Should I apply GermFree24 more than once a day?

No. But after 24 hours, sufficient exfoliation has occurred and enough skin shed to warrant reapplication. However you can apply GermFree24 as regularly as you wish.

Will GermFree24 wash or rub off?

No. GermFree24 does not rub off and will remain active on the skin's surface for up to 10 wash / dry cycles using a regular towel. We recommend that normal hand hygiene is practised when using GermFree24 to ensure hands are kept clean.

Will GermFree24 remove dirt or grease?

No. GermFree24 is a hand sanitiser and protectant and will eliminate germs and continue to protect the hands for 24 hours. It is not a hand cleaning product so will not remove dirt and grime from the hands.

Will GermFree24 discolour my clothes?

GermFree24 is a liquid that is invisible on application. It forms an antimicrobial barrier on the skin and will not stain clothing nor will it stain the skin.

FREQUENTLY ASKED QUESTIONS - Contd....

Will Zoono Hand Sanitiser dry my hands and cause chapped skin?

Unlike other hand sanitisers that contain up to 70% alcohol and chap the hands and dry the skin, Zoono GermFree24 is a low alcohol formulation. On application, Zoono GermFree24 leaves hands soft and moisturised.

Does the normal human process of losing skin cells compromise Zoono GermFree24's efficacy when it is used on the hands?

No. Testing indicates with no washing or showering, the maximum amount of time Zoono GermFree24 will remain on the skin and resist bacterial colonisation is over 60 hours. Zoono GermFree24 should be used once a day to maintain maximum effectiveness as it will re-treat areas where skin cells were shed.

What is a normal rate for sloughing human skin cells?

A sitting person loses 100,000 skin cells/minute, a person walking at 3 kph loses 5.0 million skin cells/min and a fast walking person (8kph) loses 10 million/minute (Source: Dr, Ken Goldstein, Clean Rooms, 7/99).

When Zoono GermFree24 is applied to the hands will it allow the skin to function normally (eg. produce its own oil and sweat)?


Yes. Zoono GermFree24 does not inhibit the normal function of the skin. The antimicrobial layer produced by application of Zoono GermFree24 and which bonds to the skin is permeable to gases and allows the skin to "breathe" normally.

Has Zoono GermFree24 been tested on a variety of skin types?

Yes. Dermatest in Germany has tested Zoono GermFree24 on a variety of skin types (older people, young people, fair skinned and dark skinned people etc) - with zero reactions recorded.

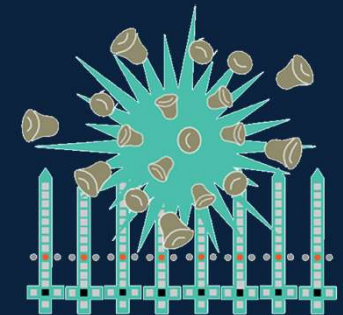
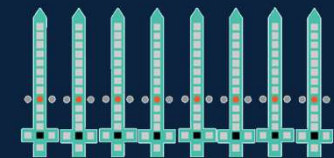
ZOONO[®]

Brought to you by:

 SUZOHAPP

ZOONO®

- 1930 → Technology discovered by German scientists
- 1950 → Developed as a textile additive but heavily stabilized in methanol
- 1980 → Technology refined further
- 1990 → Re-engineered into a water-based product but with a very limited shelf life
- 2008 → Zoono established in NZ and developed Zoono into a 9th generation, food safe, non-toxic product that was notably highly effective against bacteria and viruses
- 2012 → TGA, NZFSA and AsureQuality 2012 approvals gained in Australia
- 2013 → Rollout of Zoono global distribution network
- 2013 → Development of retail brands, shelf life of 3 years achieved
- 2014 → Zoono products now sold in 20 countries
- 2015 → United States FDA & EPA Approvals and Registrations



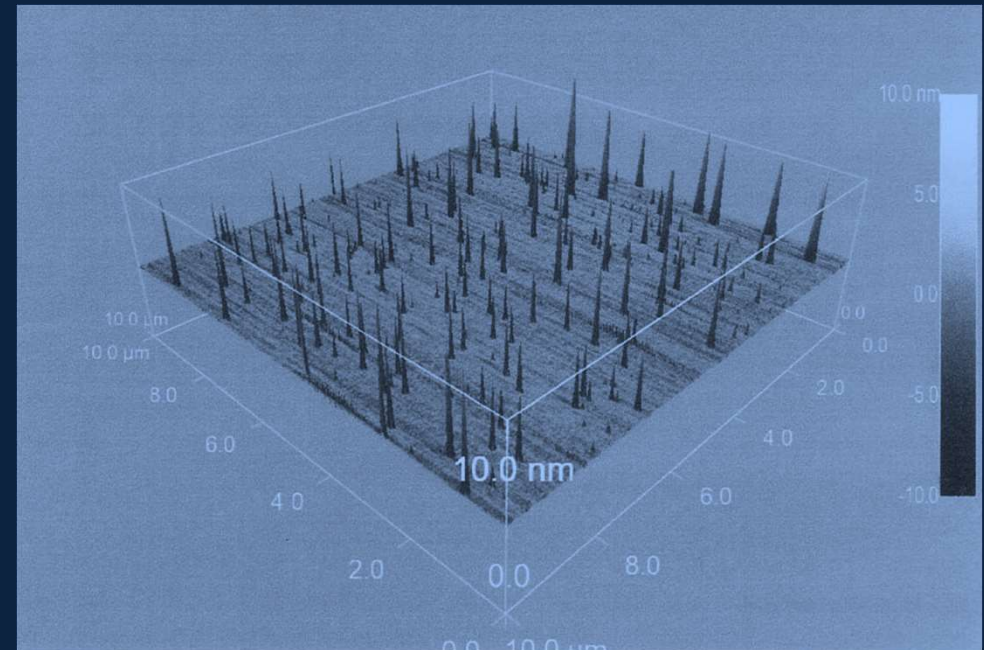
Introduction - History

When applied to a surface by spraying, wiping or 'fogging'; Zoono leaves behind a mono-molecular layer that permanently bonds to the surface.

These molecules are antimicrobial, silane-based polymers that covalently bond to the surface forming a barrier of positively charged microscopic pins.

The positively charged microscopic pins attract and pierce negatively charged pathogens. The pins rupture the cell walls. This causes the pathogen to break up with lethal effect. The layer of molecular antimicrobial pins carries on working long after the product has dried.

Routine cleaning and handwashing can continue and does not disrupt the Zoono molecule or its antimicrobial activity.



Actual photo of Zoono active surface setup via electron microscope

Quality Assurance – ATP Testing

Following application, and if desired on a regular basis between applications, adenosine triphosphate (ATP) testing can be performed

ATP is the primary energy carrier for all living organisms. The testing procedure utilizes swabs to collect a sample from the surface in question; the swabs contain luciferase, which reacts with any ATP present and produces light. This light is measured with a luminometer and quantified, indicating a level of microbial growth on the surface in question.

ATP is the industry standard for measuring sanitization and can be utilized by qualified personnel to provide ongoing monitoring and quality assurance for Zoono treated surfaces.



ATP Risk Scale



Testing to international standards;

- EN13697
- EN 1040
- EN1276
- EN1650
- PAS 2424

Over 140 successful efficacy and longevity tests by certified, recognized laboratories worldwide.



ZOONO®



Abbott Analytical
Consulting Scientists to the Disinfectant Industry

MICROCHEM
LABORATORY

eurofins

NZLABS

dermatest
Medical Research Company

BIOTEST LABORATORIES

Efficacy – Approved testing

Case Studies

Australian Child Care

10 facilities - 30 days after the identified surfaces had been treated, the average reduction in ATP readings from all trial areas, was **85.94%**.

New Zealand Corrections Facility (Clinic)

Location where ATP readings were completed	Pre-Treated Reading	Treated Reading	Follow Up Reading	Reading	Reading
Reception Desk - Sign-In Sheets	803	30	9	7	32
Prisoner Wait Room - Bench	290	34	21	18	3
Clinic Toilet - Wash Basin Tap	89	10	5	25	11
Exit Door Handle - Prison Side	285	26	23	24	38
Triage Room 2 - Bed	208	3	3	6	0

Case Studies (Cont'd)



London Underground

No Zoono – 21 Days

Zoono – 21 Days

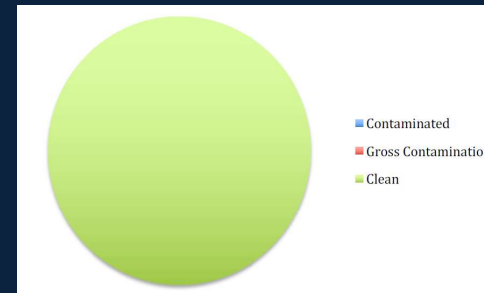
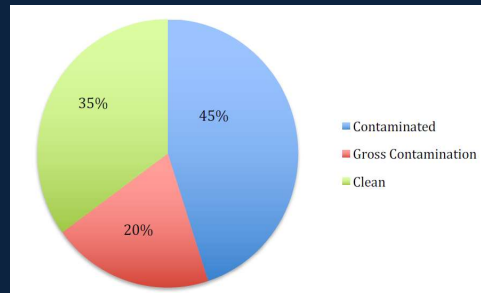
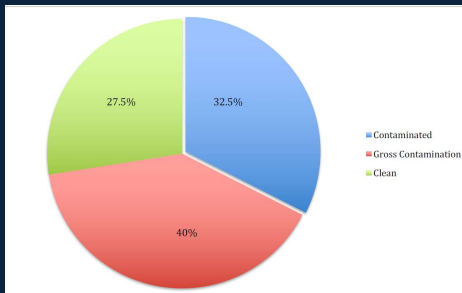
Analytical Report Code	Lab. Sample Number	Client code	Client Reference	Aerobic Plate Count
PR-15-UD-001899-01	400-2015-60257183	01	GLASS PANEL	30000
PR-15-UD-001900-01	400-2015-60257184	02	MIDDLE VERTICAL GRAB RAIL	<10
PR-15-UD-001901-01	400-2015-60257185	03	GREY HOT GRAB RAIL	<10
PR-15-UD-001902-01	400-2015-60257186	04	MIDDLE OPEN BUTTON	45
PR-15-UD-001903-01	400-2015-60257187	05	VERTICAL GRAB RAIL	27
PR-15-UD-001904-01	400-2015-60257188	06	HORIZONTAL GRAB RAIL	280
PR-15-UD-001905-01	400-2015-60257189	07	SIDE OPEN BUTTON	350
PR-15-UD-001906-01	400-2015-60257190	08	HORIZONTAL GRAB RAIL	45
PR-15-UD-001907-01	400-2015-60257191	09	VERTICAL GRAB RAIL	73
PR-15-UD-001908-01	400-2015-60257192	10	VERTICAL GRAB RAIL	<10
PR-15-UD-001909-01	400-2015-60257193	11	GLASS PANEL	<10
PR-15-UD-001910-01	400-2015-60257194	12	VERTICAL GRAB RAIL	5200
PR-15-UD-001911-01	400-2015-60257195	13	GLASS PANEL	3300
PR-15-UD-001912-01	400-2015-60257196	14	HORIZONTAL GRAB RAIL	82
PR-15-UD-001913-01	400-2015-60257197	15	VERTICAL GRAB RAIL	100
PR-15-UD-001914-01	400-2015-60257198	16	GLASS PANEL	<10
PR-15-UD-001915-01	400-2015-60257199	17	MIDDLE VERTICAL GRAB RAIL	<10
PR-15-UD-001916-01	400-2015-60257200	18	VERTICAL GRAB RAIL	110
PR-15-UD-001917-01	400-2015-60257201	19	HORIZONTAL GRAB RAIL	45
PR-15-UD-001918-01	400-2015-60257202	20	GREY HORIZONTAL GRAB RAIL	55

Analytical Report Code	Lab. Sample Number	Client code	Client Reference	Aerobic Plate Count
PR-15-UD-001919-01	400-2015-60257203	Z1	DEAD MANS HANDLE	<10
PR-15-UD-001920-01	400-2015-60257204	Z2	DRIVER SIDE BUTTON	<10
PR-15-UD-001921-01	400-2015-60257205	Z3	BIG RED BUTTON	<10
PR-15-UD-001922-01	400-2015-60257206	Z4	TELEPHONE	<10
PR-15-UD-001923-01	400-2015-60257207	Z5	HORIZONTAL GRAB RAIL	<10
PR-15-UD-001924-01	400-2015-60257208	Z6	VERTICAL GRAB RAIL	<10
PR-15-UD-001925-01	400-2015-60257209	Z7	GLASS PANEL	<10
PR-15-UD-001926-01	400-2015-60257210	Z8	OPEN BUTTON	<10
PR-15-UD-001927-01	400-2015-60257211	Z9	HORIZONTAL GRAB RAIL	<10
PR-15-UD-001928-01	400-2015-60257212	Z10	MIDDLE OPEN BUTTON	<10
PR-15-UD-001929-01	400-2015-60257213	Z11	GLASS PANEL	<10
PR-15-UD-001930-01	400-2015-60257214	Z12	MIDDLE VERTICAL GRAB RAIL	<10
PR-15-UD-001931-01	400-2015-60257215	Z13	HORIZONTAL GRAB RAIL	<10
PR-15-UD-001932-01	400-2015-60257216	Z14	VERTICAL GRAB RAIL	<10
PR-15-UD-001933-01	400-2015-60257217	Z15	MIDDLE VERTICAL GRAB RAIL	<10
PR-15-UD-001934-01	400-2015-60257218	Z16	GLASS PANEL	<10
PR-15-UD-001935-01	400-2015-60257219	Z17	MIDDLE OPEN BUTTON	<10
PR-15-UD-001936-01	400-2015-60257220	Z18	VERTICAL GRAB RAIL	<10
PR-15-UD-001937-01	400-2015-60257221	Z19	GLASS PANEL	<10
PR-15-UD-001938-01	400-2015-60257222	Z20	VERTICAL GRAB RAIL	<10

Pre-Trial

No Zoono – 21 Days

Zoono – 21 Days



Field Trials/Case Studies

Zoono at Work – North America

ZOONO®



IMMU-SHIELD

POWERED BY ZOONO



ALPHA WARRIOR



- Offshore East Coast Oil and Gas
- National Airline
- East Commercial Helicopter Company
- Ontario elderly care facility chain
- Northern Alberta oil and gas
- International automobile manufacturers
- Major Alberta transportation network
- National communication and media companies
- National restoration service providers



Dallas Love Field

Zoono At Work

Zoono at Work – International

ZOONO®

Rentokil
Initial



香港 | HONG KONG
國際機場 | INTERNATIONAL
AIRPORT

