

THE MOST POWERFUL WEAPON AGAINST THE CORONA VIRUS







INTRODUCTION

At STERISAFE, we make solutions for whole room disinfection of surfaces and air.

We respond to the global challenges of bacteria and viruses outbreaks, fungi and other pathogen contamination.

We respond to the increasing Hospital Acquired Infections (HAI) all over the world.

And we respond to the urgent need to upgrade technologies used to disinfect rooms.

STERISAFE is a health-tech company with the ambition to lead the revolution in upgrading the environmental hygiene methods in the healthcare segment, as well as in other industries.

We want to lead the revolution for a world where infection is not a part of people's every day life.



WHO has issued an edition of guidance on infection prevention towards Corona Virus



"Notify the area receiving the patient of any necessary precautions as early as possible before the patient's arrival"

• "Routinely clean and disinfect surfaces which the patient is in contact"

World Health Organization

• "Ensure that cleaning and disinfection procedures are followed consistently and correctly."



Serious outbreaks of contagious diseases over the past years

SARS Corona virus outbreak

MERS Corona virus outbreak Novel Corona virus outbreak

2002-2003

2012-2015

2019-2020

How to avoid the next virulent outbreak?

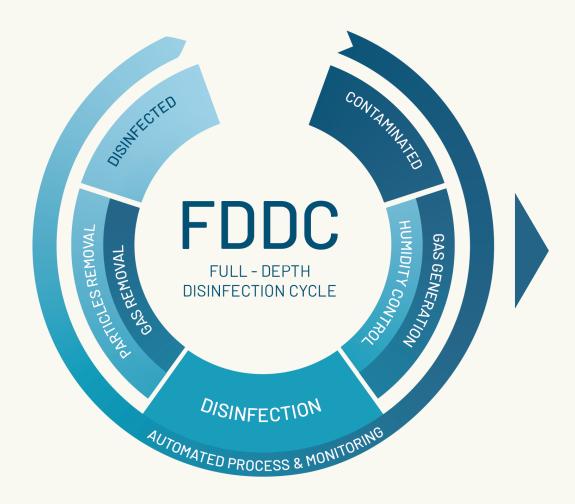


SUPERIOR AUTOMATED DISINFECTION TECHNOLOGY



The Full Depth Disinfection Cycle (FDDC) Technology

A patented process to disinfect air and surfaces from all harmful pathogens

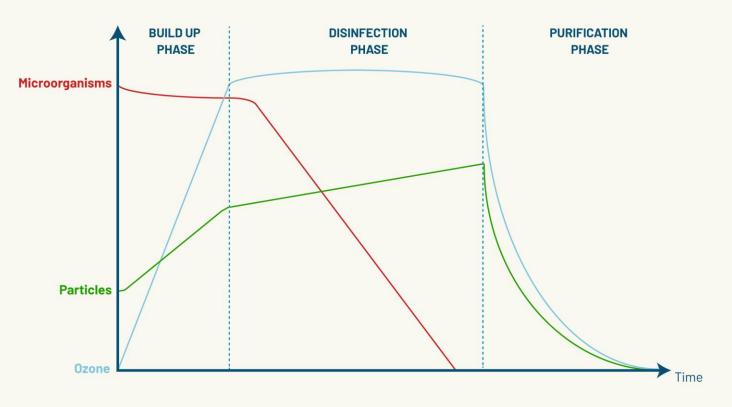


- ✓ High efficacy kill pathogens up to 99.99999%
- Gas phase treatment reaches all cracks and corners; no condensation
- Continuously monitors the biocidal gas concentration automated validation
- Documentation of each treatment
- ✓ Removes the by-products (particles) after disinfection
- ✓ Active removal of the biocidal gas after disinfection
- \checkmark Unique and patented technology

Effective – Safe – Simple. The FDDC is a superior disinfection solution



The Full Depth Disinfection Cycle process



The 3 phases of the FDDC process:

- Build-up: Biocide gas generated in-situ (O₃ ozone)

 gas widely diffused in the room full control of concentration and humidity level.
- 2. Disinfection: High gas concentration and high humidity maintained and spread into every nook and cranny.
- **3. Purification:** All remaining biocide gas actively removed and turned into oxygen. Removal of all particles and nanoparticles (particle pollution). Parameters monitored to guarantee safety at reentry.

A fully automated and monitored disinfection solution

Total FDDC process time subject to room size and outbreak situation



THE PRODUCTS

STERISAFE PRO

- ✓ All-in-one FDDC mobile unit
- ✓ Easy to move from room to room
- \checkmark Treat up to 130 m³
- \checkmark CE Marking and Biocide registration in place
- ✓ Patented technology
- ✓ First solution not using any form of Chemicals





STERISAFE PRO – developed for healthcare, valuable for many industries

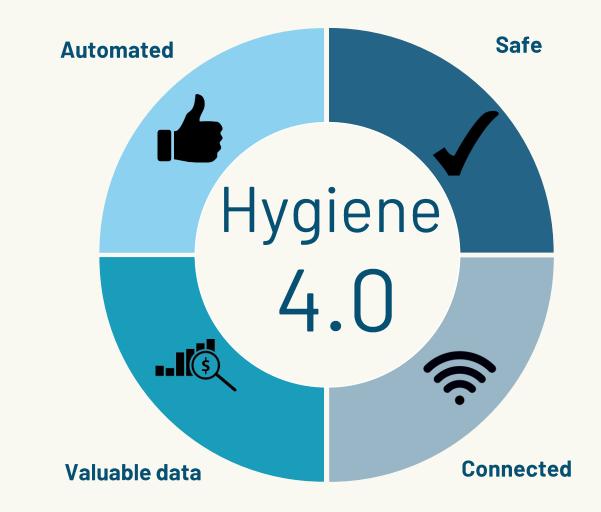
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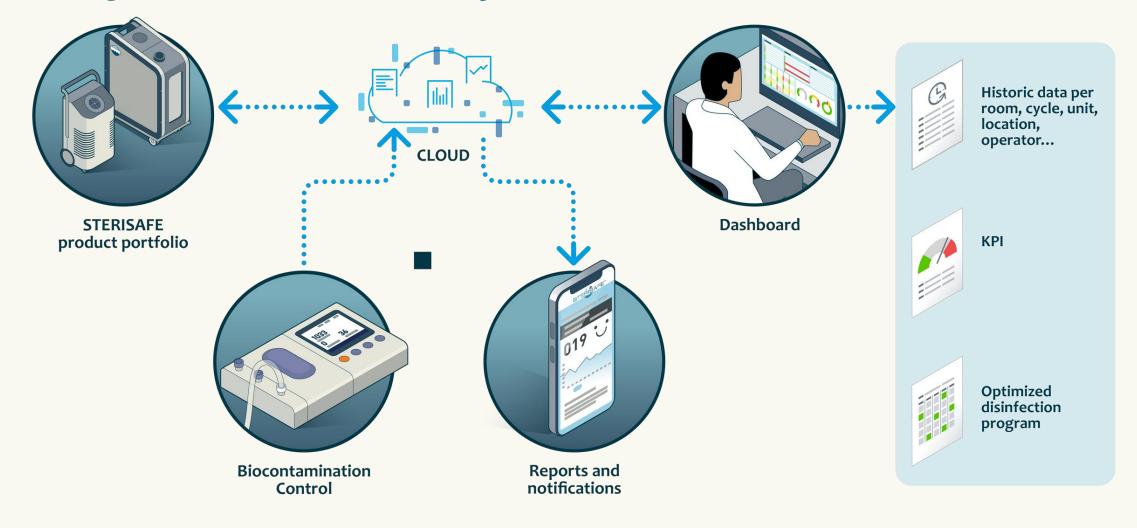
STERISAFE introducing Hygiene 4.0

- The world-first cloud-based room hygiene system for multiple sites management
- The establishment and management of disinfection protocols, to secure adequate infection prevention standards
- ✓ The generation and provision of disinfection protocols to external bodies, such as insurance companies and legislative institutions
- ✓ System interface serves as the dashboard for managing STERISAFE equipment and hygiene protocols.





Hygiene 4.0: The connected platform for room hygiene management and traceability





Hygiene 4.0: The connected platform for room hygiene management and traceability





EFFICACY & APPROVALS



Strong third party efficacy documentation

Type (minimal log-reduction required)	Germ		ISAFE uction *)
Bacteria (> 5.0)	Enterococcus faecium*	6.73	99.9999%
	Enterococcus hirae***	6.59	99.9999%
	Proteus mirabilis*	5.80	99.9999%
	Pseudomonas aeruginosa*	6.99	99.99999%
	Staphylococcus aureus*	6.80	99.99999%
	VRE*	5.51	99.9999%
	Listeria monocytogenes*	≥ 6.97	99.99999%
	Escherichia coli*	6.18	99.9999%
Fungi & yeast (> 4.0)	Candida albicans*	4.17	99.99%
Viruses (> 4.0)	Adenovirus**	≥ 4.28	99.99%
	Norovirus**	≥ 4.96	99.999%
	Modified Vaccinia Ankara (MVA)**	≥ 4.68	99.999%
	Polyomavirus SV40**	4.77	99.999%

In blue: Reference microorganisms listed in NF T 72-281

* Tested by Danish Technological Institute

** Tested by Dr. Brill + Partner GmbH Institute for Hygiene and Microbiology

*** Tested by INFUSER ApS and Metropolitan University College

*) Log-reduction is typically marked on commercial packaging as a kill-rate percentage, where a log-2 reduction corresponds to a 99% germicidal power, a log-3 to 99.9%, and so forth.



Certification

- ✓ STERISAFE is the owner of a Biocide Product Registration dossier for Ozone (BPR – Directive 98/8/EC – Listed in Article 95)
- ✓ CE Marked
- ✓ Classified by US EPA
- ✓ Efficacy tested by accredited and independent laboratory under the standard NF T 72-281









Total Quality. Assured.









Endorsement by key opinion leaders (KOLs)

Documented with Prof. Dr. J. K. Knobloch at UKE (Hamburg, DE). KOL for Western Europe



Standardised test of the disinfection efficiency of room

one under complex room o

- Operation in complex rooms
 - Comparison with H_2O_2 foggers
 - Efficacy on multi-resistant
 microorganisms
 → C. Auris, Acinetobacter, E. Faecium

Documented with Prof. Dr. J. Škrlin at DUH (Zagreb, HR). KOL for Southern Europe



- Real hospital environment
- Multi-resistant microorgansims MRSA, VRE, ESBL
- Addition:Air sampling

disinfection with	Antibular for transmission Minimum (and Magnet and Magnet downlowed figures Magnet Magnet Magnet		
nd krygleme, Field of Acouptual	Birte Knobling, Tatjana Kostenko, Johannes KM. Knobloch	micshargin/MIC one to twofold dilutions above th wave categorised as loaderfile resistant biopath 115 of these loaders were consend for mutation MI2 regises utilizing reveal generation expanding	
allable free of charge by infuser	Standardisierte Prüfung der Desinfektionsleistung einer Raumdesinfektion mit Ozon unter komplexen räumlichen Bedingungen	Results: In all 115 Justeau no misserae mutations In RK33 RK2 or R52	
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urfaces contaminated by a rss exhibited an average test	Material und Methode		
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e concentration of its ppm about iso minutes with the ibox, uits out of no highly surfaces placed showed no		M. Austram D. Ovth-Hilliam M. Lackman C. La Madronake Drive cell Institute. Settier Gr Highers on Mitwishidget. Innotect. Determini	
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equently, a reduction of the at least g.s. log could be a of the position of the text open cabinets, drawers and	The second secon	diversity in MICs to be analyzed. Goal. The sim of bits study was to constant site values: MIC AFST, to sheah for MIC valiability be respectively part orbites. Middada: In study 100 wast analyses blood and	
m dwinfection with an ozone	Ergebnisse	intra abdominal fluids in + 44) were investigated dame via E-text* applying flucaneous and anisidate	
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·e-sectors	significante Adduktion von E. Derchen AFCC 6057 erreicht.	tine with the exception of special indications such	

mical angle MIC one to transfold dilutions above the CB (0.032, 0.064) were categorised as botherine resistant transaction micallegies. Hence, 115 of these tooletes were conserved for mutations in FRS1 HS1 and HS2 regime utilizing near generation enquescing technology.	510-3 Disinfection of surfaces contaminated with Candida auris using ozone under complex room conditions
Receits: In all 115 Isolates, no missence mutations could be detected in FRGS HSS or HSS	<u>J. K. Knoblech¹, G. Franke¹, C. E. Belmar Campos¹, E. M. Klapp¹, A. Voor¹, J. F. Meis²</u>
Conclusion: The initiativity in explanate rule of C allocation was consid- wally lighter than in other exhibits and/or, although stress resistance is usually observed in echinocandie instituted locates. No initiations are found in the better research of DEI is how a builties indicates	"Anien ofici dollarni Warshup & Samutho (* Institute Ter Waldolartie Microbiogia, Vesingia und Veglens, A fechator sisti Kandenbauthogines, Nanthurg Beacchlant, "Radowa Dollarovich Vesifani Cantor, Samuthore of Mathad Microbiology, Nijergen, Niedratinski
that resistance is very unifieds. Hence, it could be beneficial to recal-	introduction: Canalida auris is an energing multiresistant year
uate the epidemiological cut-off value for micaturgin for C. obliganc	which has caused multiple hespital outbreaks. Teasts can display
and to reconsider the thanapeutic failure evaluation for these iso-	high ability to survive on inanimate surfaces. Therefore, cleaning a
lates. Additionally, in vivo studies should be done in order to evaluate the potential clinical failurs.	diselectors is an important part in the prevention of C ouris tran- mission. In this study, we investigated the efficacy of an automat
	mon departurination using come against C auch under compli-
510-2 Multiple versus single colony MIC testing in Candida species	Mamela/Methods: Four C. auto strates (2011)001/north-au clade 1, 1001)056/Ladie American stade fit, 2015)005/Ladie 10010211/Jathanisadol usars analosado uch manarr el filiar a
M. Agnar: D. Orth-Höller; M. Lackner; C. Laus-Filer Mathematic Driver (A) Institute. Setting So Hypere and Walkinishe	He to survive an dry surfaces. Two strains with a high survival ra- were used for further experiments. The Starizate ¹⁰ pro-instrume
Mikubiologis, Innohuol, Octornish	was used in a patient room with an attached bathroom, ${\mathbb C}$ as
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THE VIRUS KILLER



STERISAFE – The Virus Killer

STERISAFE technology has demonstrated efficacy up to **99.999%** against non-enveloped and enveloped viruses



Adenovirus



Murine Norovirus



Modified Vacina Virus, strain Anakara (MVA)

These pathogens are the standard laboratory test viruses from the EN16777* to prove efficacy on enveloped viruses, such as Corona Virus

*) EN16777 – Quantitative non-porous surface test for the evaluation of virucidal activity of chemical disinfectants used in the medical area



LET'S STOP IT NOW.

FACE