HSP

Hazardous Safety Products Ltd

Specialists in Decontamination Solutions

Bio Security Products

Protecting Your Workforce

About us...

Hazardous Safety Products (HSP) are a fast growing UK company who manufacture specialised equipment predominantly for the asbestos removal industry but also other industries where decontamination equipment is required.

We have over 100 years combined experience within the asbestos removal industry on a global scale since forming HSP in 2017.

From our manufacturing premises in Wigan, HSP offer a full range of in house manufactured Negative Pressure Units, Roving Heads, Water Management Systems, Modular Shower Systems, Equipment Locks, Decontamination Trailers and Combined Welfare/Decontamination Trailers. We are also able to offer bespoke design and manufacture options as well as own branded products.

HSP have managed to secure a distribution agreement with Blastrac for Floor Grinding Systems and accessories. Our operatives have also been fully trained to carry out servicing and repairs on Blastrac Floor Grinding Systems.

HSP have also secured a distribution agreement with Steri-7 for their range of Steri-7 Extra High Level Disinfectants and associated products such as hand wipes, hand rubs and more. Steri- 7 Extra has Reactive Barrier Technology which means not only does it kill bacteria, spores, fungi, mould and viruses in seconds, but it continues to add further biosecurity between cleaning.

HSP have also sourced globally a variety of ULV fogging machines for general office cleaning to high level disinfection. Coupled with these we have also been able to source Dry Particle Aerosol Generators for air sterilisation.

To compliment our range we also hold stocks of many other associated products such as disposable coveralls, masks, goggles, gloves, wipes and general cleaning products.

Whatever the scenario we are able to offer a solution.

All products are available from Hazardous Safety Products or our sister company HSP Site Supplies Ltd.

We have experience in...

- Design & Manufacture
- Bespoke Solutions
- Service, Test & Repair
- Import & Export
- RPE Selections
- PPE Selection
- Decontamination Systems
- Blastrac Floor Grinding Systems

We Manufacture ...

- Negative Pressure Units
- Roving Heads
- Equipment Locks
- Modular Shower Units
- Water Management Systems
- Pump Filtration Units
- Decontamination Trailers
- Welfare Trailers
- Disinfection Booths

We sell....

- HSP Manufactured Equipment & accessories
- Blastrac Floor Grinding Equipment & Accessories
- Steri-7 Disinfectants
- ULV Foggers
- Dry Aerosol Generators
- Powered Respirators & Filters
- Halfmasks & Filters
- Disposable PPE & RPE
- Head & Sensory Protection
- Hand & Footwear

And finally we offer for free....

- Quality of service
- Honesty & reliability
- Competitive Rates
- Technical Advice
- If we can help we will

Contents

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PERSONAL PROTECTIVE EQUIPMENT (PPE)

Lakeland Chemex 1EB Coverall Type 3&4

- Very lightweight, soft and flexible fabric.
- Coverall with elasticated hood, cuffs, waist and ankles, single zip and storm flap and thumb loops
- Low noise level - improved comfort and safety
- Stitched and taped seams
- Very cost effective Type 3 & 4 chemical protection
- Infectious Agent Barrier - passes at highest classes in all four EN 14126 bio-hazard tests

Conforms to;
EN 14605 (Type 3 & 4)
EN 13982 (Type 5)
EN 13034 (Type 6)
EN 1149-5 (Anti-static)
EN 14126 (Bio hazard / infectious agents)
EN 1073 (radiation contaminated dusts)

Code	Description
DISP0100-0102	Lakeland Chemex 1EB Coverall Type 3&4

Type 5&6 SMS Coveralls

Our breathable Type 5&6 Coveralls offer both particle and splash protection without compromising on all-important breathability

- Type 5/6 protection
- Limited hazardous splash protection
- Particle protection
- Zip front with cover
- Elasticated wrist/ankle closure
- Elasticated hood
- Size L, XL, XXL, XXXL, XXXXL
- Colour Red, Blue, White, Orange

Conforms to EN 13982-1, EN 13034

Code	Description
DISP0048-73	Type 5&6 SMS Coveralls

Disposable Masks FFP3V

Our FFP3V have a unique design which provides a very low breathing resistance due to the increased filtration area. Their design also ensures they can be worn with safety glasses or goggles, reducing fogging.

They provide comfort and user acceptance through their full facial close-cell foam, embossed fringe seal and smooth polypropylene outer layer which avoids loose fibres. The adjustable head strap ensures a secure fit with minimum leakage and the adjustable nose piece means they can easily be fitted to the user
Conforms to EN149:2001 + A1:2009

Code	Description
DISP0200	Disposable Masks FFP3V

Disposable Mask FFP2V

Quality comfortable product ideal for use in the construction, metalwork, DIY industries. The mask offers protection against such tasks as demolition, groundwork, machining, grinding, polishing and finishing. The Polypropylene outer layer provides a smooth lining. Soft close-cell nose foam and adjustable nose piece ensure custom shape this increases the worker comfort & acceptance.
Conforms to EN149:2001 + A1:2009 FFP2 NR

Code	Description
DISP0240	Disposable Mask FFP2V

KN95 Disposable Mask

The KN95 Disposable face mask is made of 3-layers, inside and outside layers are PP nonwoven and the middle layer is manufactured using high standard 99 filter paper with Ear-loop style.
Conforms to Chinese standard GB2626-2006

Code	Description
DISP0250	KN95 Disposable Mask

Please note KN95 masks should only be used in the UK by frontline care workers in the absence of FFP2/FFP3 availability

3 Ply Ear Loop Civil Face Cover

Basic 3 ply face covering

Code	Description
DISP0300	3 Ply Ear Loop Civil Face Cover

Safety Wellington Boot

These multipurpose safety Wellington boots offer waterproof protection and feature steel toecaps and penetration-resistant midsoles. They provide great comfort and a good fit for everyday use.

- Full Safety
- Steel midsole
- Various chemical resistant
- Oil resistant outsole
- 100% waterproof
- EN ISO 20345:2011 S5 SRC
- Size 6-11
- Colour Black

Code	Description
FOOT0009-15	Safety Wellington Boot

Non Safety Wellington Shoes

Easy to slip on and off, these waterproof wellington shoes keep feet warm thanks to their inbuilt insulation against cold conditions. Their easy-to-clean laceless design and slip resistance make these a great choice for food industry workers.

- 100% waterproof
- Oil-resistant
- Insulates against temperatures down to -20°C
- Slip-resistant sole
- Non-metallic
- Slip Rating: SRA
- Size 6-11
- Colour White/Green

Code	Description
FOOT0019-23	Non Safety Wellington Shoes

Powderfree Vinyl Gloves

Made from high grade Polyvinyl Chloride, our Powderfree Vinyl Gloves are a simple and effective glove, ideal for clinical, automotive and food processing use. And as they're latex free, they are perfect for latex allergy sufferers.

- High quality polyvinyl chloride
- Powder free
- Latex free
- Smooth finish
- Beaded cuff

Medical Grade – AQL 1.5 – conforms to EN 455 parts 1-4 (11401-4 only)

Code	Description
GLOVE0055-57	Powder free Vinyl Gloves

Disposable Nitrile Diamond Grip Gloves Black PK90

These robust and durable gloves feature a unique "diamond grip" texture across their surface, allowing for outstanding grip - even when being used in greasy environments. These disposable gloves are made from a heavy duty Nitrile, meaning that they are tough, tear resistant and have excellent stretch. They are also extremely easy to don and remove thanks to their polymer coating.

- AQL 4.0
- CAT III
- Chemical Resistant
- Level 5 Dexterity
- Food Approved
- 100% Latex Free
- Ambidextrous
- Textured Grip
- Powder Free
- Size XL

Conforms to EN ISO 374-1:2016 - Type B
PPE Regulation (EU) 2016/425
Plastic Materials and Articles in Contact with Food Regulation (EU) No 10/2011
EN 374-1:2016/Type A
EN 374-4:2013 % Degradation
EN ISO 374-5:2016

Code	Description
GLOVE0045	Disposable Nitrile Diamond Grip Gloves Black PK90

MEDI-1ST Medical Face Visor

Used by care homes, catering staff, pharmacists, dental surgeons, production & hygienic environments, retail, etc. **Not for use in sterile conditions.**

- Full Face Protection from liquid droplets, sprays and splashes
- Optical Grade Clear recyclable 300micron P.E.T for clarity
- CE Certified
- Soft Medical Grade foam headband
- Adjustable non elasticated strap to prevent slippage
- Lightweight easy use
- Anti-fog
- Suitable for use with prescription glasses and face masks
- Disposable and recyclable
- Visor size is 314mm wide x 240mm long

Code	Description
MEDVISOR0001	MEDI-1ST Medical Face Visor

GRIPSAFE DISPOSABLE GLOVES

Protect Yourself!

At Hazardous Safety Products we have multi-use nitrile gloves in varying lengths and thicknesses. These gloves are certified to protect against viruses, offering resistance to penetration by blood-borne pathogens.

Easy visual Management

The Gripsafe range features 4-colour coded multi-use Nitrile gloves, each with their own distinctive length and thickness. Following consumer feedback and confusion over which Nitrile glove is right for an End User, Just 1 Source & Supply Ltd have developed a concept to make it easier for the Distributor and End User to make a more informed choice.

Code	Description
GLOVE100	GSR Gripsafe Red Box 50
GLOVE101	GSO Gripsafe Orange Box 50
GLOVE102	GSG Gripsafe Green Box 50
GLOVE103	GSB Gripsafe Blue

All Gripsafe products are CE Category III with a colour option for 7 out of the 18 chemicals listed under the EN374-1:2016 standards: Although we are not actively selling the Gripsafe range as a chemical solution, as it is always up to the end user to speak to the chemical provider to determine the classification level glove required, we can confirm that our range have the certification for the following letters under the EN374-1:2016 standards:

Features and benefits of Gripsafe

MANUFACTURING

Gripsafe (Red, Orange & Green) gloves are produced in a silicone free factory, making them ideal for all body shop tasks. Products containing silicone can prevent the paint adhering to the surface causing fisheye. The Red, Orange & Green are all ambidextrous and manufactured at the same plant, but the Blue are manufactured at a different factory, as we currently don't have the ability to manufacture in a 400mm length.

ENVIRONMENT

Gripsafe are stronger than most Nitrile products. They are purposely designed for multi-use. They don't tear as easily and offer increased puncture resistance. They can last up to 5 times longer than single use disposable gloves, saving down time in replacements, resulting in less wastage, reducing cost in use whilst supporting any social responsibility requirements.

DIFFERENTIALS

The Gripsafe (Red, Orange & Green) have a unique patented fish scale pattern embossed, both internally and externally.
The distinctive internal embossing, channels sweat, by allowing air to circulate and the skin to breathe, so that the glove grips the hand, minimising slippage and reducing hand fatigue.
The external fish scale pattern strengthens the glove, making it more durable and tougher to tear when stretched, offering unrivalled grip.
The embossed pattern on the thumb and fingers, gives it outstanding finger and thumb pinch grip.

WHY GRIPSAFE?

A solution offering of 4 colours, each in a different length and thickness. Most manufacturers pack their boxes by weight, whereas all Gripsafe products are packed by quantity. **Red, Orange & Green are packed in boxes of 50**, this makes our products a cheaper way to purchase from an end user perspective. **The Blue are individually bagged in pairs**.

Gripsafe are touchscreen friendly, working flawlessly when operating diagnostic software, smart phones, tablets and screens.

Gripsafe products are food safe conforming to EN1186.

The strength of the Gripsafe range allows them to be worn over gloves, to offer a waterproofing solution.

	Codeletter	Chemical	CAS Number	Class
OLD	A	Methanol	67-56-1	Primary alcohol
	B	Acetone	67-64-1	Ketone
	C	Acetonitrile	75-05-8	Nitrile compound
	D	Dichloromethane	75-09-2	Chlorinated hydrocarbon
	E	Carbon disulphide	75-15-0	Sulphur containing organic compound
	F	Toluene	108-88-3	Aromatic hydrocarbon
	G	Diethylamine	109-89-7	Amine
	H	Tetrahydrofuran	109-99-9	Heterocyclic and ether compound
	I	Ethy acetate	141-78-6	Ester
	J	n-Heptane	142-82-5	Saturated hydrocarbon
	K	Sodium hydroxide 40%	1310-73-2	Inorganic base
NEW	L	Sulphuric acid 96%	7664-93-9	Inorganic mineral acid, oxidizing
	M	Nitric acid 65%	7697-37-2	Inorganic mineral acid, oxidizing
	N	Acetic acid 99%	64-19-7	Organic acid
	O	Ammonium hydroxide 25%	1336-21-6	Organic base
	P	Hydrogen peroxide 30%	7722-84-1	Peroxide
	S	Hydrofluoric acid 40%	7664-39-3	Inorganic mineral acid
	T	Formaldehyde 37%	50-00-0	Aldehyde

GRIPSAFE RED

The Gripsafe RED is a 4.5 MIL, 240mm long, specially formulated, red nitrile, type C glove. This product features a patented 'fish scale grip', offering unrivalled traction grip. The Gripsafe RED is silicone free, powder free, and latex free – offering superior strength whilst maintaining maximum dexterity. The Gripsafe RED has excellent chemical resistance and is a proven barrier to toxic fibres. This glove is AQL 1.5; touchscreen-friendly; and, is suitable for use with/around food and food stuffs.

Description

- 4.5 MIL, specially formulated, red nitrile, type C glove (240mm long).
- Patented 'fish scale grip' on the inner and outer offers unrivalled traction grip.
- Powder free – latex free – silicone free.
- AQL 1.5.
- CAT III.
- Excellent chemical resistance and proven barrier to toxic fibres.
- Durable beaded cuff.
- Touchscreen compatible.
- Safe for use with/around food and food stuffs.
- Sizes – 8 (M) to 11 (XXL)
- Case quantity – 500 (per size) – 10 x boxes of 50 gloves
- EN374-1:2016 – KT

Applications include – Engineering, Automotive, Assembly, Food Processing, General Handling, Landscaping, Agriculture, Plant & Machinery, DIY, Pharmaceutical.

GRIPSAFE ORANGE

The Gripsafe ORANGE is a 6.0 MIL, 285mm long, specially formulated, orange nitrile, type B glove. This product features a patented 'fish scale grip', offering unrivalled traction grip. The Gripsafe ORANGE is silicone free, powder free, and latex free – offering superior strength whilst maintaining maximum dexterity. The Gripsafe ORANGE has excellent chemical resistance and is a proven barrier to toxic fibres. This glove is AQL 1.5; touchscreen-friendly; and, is suitable for use with/around food and food stuffs.

Description

- 6.0 MIL, specially formulated, orange nitrile, type B glove (285mm long).
- Patented 'fish scale grip' on the inner and outer offers unrivalled traction grip.
- Powder free – latex free – silicone free.
- AQL 1.5.
- CAT III.
- Excellent chemical resistance and proven barrier to toxic fibres.
- Durable beaded cuff.
- Touchscreen compatible.
- Safe for use with/around food and food stuffs.
- Sizes – 8 (M) to 11 (XXL)
- Case quantity – 500 (per size) – 10 x boxes of 50 gloves
- EN374-1:2016 – JKPT

Applications include – Agriculture, Insulation, Automotive, Construction, Engineering, Plumbing, Veterinary, Assembly, Janitorial, General Handling.

GRIPSAFE GREEN

The Gripsafe GREEN is a 8.0 MIL, 300mm long, specially formulated, green nitrile, type B glove. This product features a patented 'fish scale grip', offering unrivalled traction grip. The Gripsafe GREEN is silicone free, powder free, and latex free – offering superior strength whilst maintaining maximum dexterity. The Gripsafe GREEN has excellent chemical resistance and is a proven barrier to toxic fibres. This glove is AQL 1.5; touchscreen-friendly; and, is suitable for use with/around food and food stuffs.

Description

- 8.0 MIL, specially formulated, green nitrile, type B glove (300mm long).
- Patented 'fish scale grip' on the inner and outer offers unrivalled traction grip.
- Powder free – latex free – silicone free.
- AQL 1.5.
- CAT III.
- Excellent chemical resistance and proven barrier to toxic fibres.
- Durable beaded cuff.
- Touchscreen compatible.
- Safe for use with/around food and food stuffs.
- Sizes – 8 (M) to 11 (XXL)
- Case quantity – 500 (per size) – 10 x boxes of 50 gloves
- EN374-1:2016 – JKPT

Applications include – Utilities, Aircraft Maintenance, Fishing Industries, Catering Industries, Agriculture, Janitorial, Construction, General Handling, Landscaping, Mortician.

GRIPSAFE BLUE

The Gripsafe BLUE is a 15.0 MIL, 400mm long, blue nitrile, type A glove. This product is flock lined for comfort and features a raised diamond grip on the exterior, offering great grip. The Gripsafe BLUE is silicone free, powder free, and latex free – offering superior strength whilst maintaining maximum dexterity. The Gripsafe BLUE has excellent chemical resistance and is a proven barrier to toxic fibres. This glove is AQL 1.5; touchscreen-friendly; and, is suitable for use with/around food and food stuffs.

Description

- 15.0 MIL, blue nitrile, type A glove (400mm long).
- Flock lined.
- Raised diamond grip offers great grip.
- Powder free – latex free – silicone free.
- AQL 1.5.
- CAT III.
- Excellent chemical resistance and proven barrier to toxic fibres.
- Touchscreen compatible.
- Safe for use with/around food and food stuffs.
- Sizes – 8 (M) to 11 (XXL)
- Case quantity – 60 pairs (per size) – 6 x boxes of 10 pairs
- EN374-1:2016 – AJKLOPT
- EN388:2016 – 4101X

Applications include – Chemical Handling, Car Detailing, Utilities, Fishing Industries, Food Processing, General Handling, Janitorial, Agriculture, Sewerage, Landscaping.

ELIPSE INTEGRA

Integra is tested and approved as one combined respiratory protection to EN 140. It is the only half mask approved with permanently fixed safety eyewear.

Elipse INTEGRA COMBINED EYE and RESPIRATORY PROTECTION

Compact, lightweight and flexible design which adapts and fits perfectly to the face and offers a unique and innovative combined protection, reducing risks of non-compatibility, non-conformity and mist build up. Large central non-return exhalation valve which reduces the breathing resistance for the user and keeps moisture build-up inside the mask to a minimum. Lightweight, non-slip strap that is easily adjusted in 4 positions for improved comfort and to allow safe use even in high humidity or wet conditions. Elipse® Integra come in 2 sizes.

PROTECTION PROPERTIES

The lens is designed in Polycarbonate and can withstand 45 m per second impacts. The coating applied meets (N) Anti Fog and exceeds the standard (K) anti-scratch coating seen on the market for a longer durability. Elipse Integra is compatible with the current Elipse® filter range.

APPLICATION

Type Protection

	A	organic gases and vapours with a boiling point above 65°C
	B	inorganic gases and vapours (excluding carbon monoxide)
	E	sulphur dioxide and other acidic gases and vapours
	K	ammonia and organic ammonia derivatives
	AX	certain organic gases and vapours with a boiling point ≤ 65 °C. For single use only.

324g!

DIMENSIONS:
Mask with P3: 170 x 165 x 190 mm
Mask with A1P3: 170 x 165 x 190 mm
Mask with High Performance: 130 x 120 x 195 mm
Filter P3: 12 mm x 94 mm x 50 mm
Filter A1P3: 48,5 x 94,5 x 60 mm
High Performance Filter: 95 x 55 x 60 mm

WEIGHT:
Mask with P3: 209 g
Mask with A1P3: 324 g
Mask with High Performance: 441 g
Filter P3: 17,2 g
Filter A1P3: 83 g
High Performance Filter: 137 g

MATERIAL:
Mask: Medical grade TPE (Silicone free).
Goggle lens: Polycarbonate with flow coating for anti-scratch/anti-fog.
Goggle face seal: Medical grade TPE (Silicone free).

LIFETIME:
Filters are identical to Elipse® Range and follow the same criteria for lifetime.
Filters can be used for both Elipse® and Integra Range.

TYPE OF FILTER / CLASS

- HESPA™ (High Efficiency Synthetic Particulate Airfilter) P3 R D >99,95% (minimum efficiency) Available with activated carbon for removal of small concentration of organic vapours/odours and a higher comfort.
- High performance gas and combined gas & particulate cartridge filter range.
- 2.F.K.N marked.

MATERIALS

The materials used for masks and filters are hypo-allergenic, odourless, FDA compatible and Non latex or silicone.

BATCH REPORTS

Full traceability of each back against each material used.

ON LINE TESTING

100% of filters are efficiency tested with NaCl to ensure the highest performance and quality.

STORAGE LIFE:

3 years, for mask and filters for gases
5 years, for mask and filters for particulates
3 years, for mask and filters for particulates with nuisance odour

CERTIFICATIONS

Integra Mask (Goggle combined) conforms to EN 140:1998, Integra Mask (Goggle combined) conforms to EN 166:2002, Particulate filters conform to EN 143:2000+A1:2006, Gas and combined gas & particulate filters conform to EN 14387:2004+A1:2008, Integra Masks and filters are CE certified.

Elipse Integra Mask Characteristics

Model	Description	Code	Packaging
	**P3 Elipse Integra** Mask for application with Dust only	SPR407 (S/M) SPR406 (M/L)	5 pcs. per box
	**P3 replacement filters**	SPR316	10 sets of 2 pcs. per box
	**P3 Nuisance odour Elipse Integra** Mask for application with Dust only	SPR404 (S/M) SPR405 (M/L)	5 pcs. per box
	**P3 nuisance odour replacement filters**	SPR336	10 sets of 2 pcs. per box
	**A1P3 Elipse Integra** Mask for application with Organic Gases and Dust	SPR444 (S/M) SPR401 (M/L)	5 pcs. per box
	**A1P3 replacement filters**	SPR341	6 sets of 2 pcs. per box
	**ABEK1 Elipse Integra** Mask for multiple Gases and Vapours	SPR538 (S/M) SPR539 (M/L)	5 pcs. per box
	**ABEK1 Replacement filters**	SPR489	5 sets of 2 pcs. per box
	**A2P3 Elipse Integra** Half Mask Organic Gases and Vapours until 5000 ppm and Dust	SPR536 (S/M) SPR537 (M/L)	5 pcs. per box
	**A2P3 Replacement filters**	SPR497	5 sets of 2 pcs. per box
	**ABEK1P3 Elipse Integra** Mask for for multiple Gases and Vapours and Dust	SPR534 (S/M) SPR535 (M/L)	5 pcs. per box
	**ABEK1P3 Replacement filters**	SPR492	5 sets of 2 pcs. per box
	**Peel off visor x 10**	SPM520	50 sets of 10 pcs. per box
	**Case for replacement P3 filters for High Performance Half Mask**	SPM523	10 sets of 2 pcs. per box
	**Pair of P3 replacement filters for High Performance Half Mask**	SPM524	10 sets of 2 pcs. per box
	**Integra Case**	SPM007	5 pcs. per box

STERI-7

What is STERI-7 Reactive Barrier Technology?

STERI-7 is a high-level, broad spectrum, one stage disinfectant cleaner. When applied to any surface from a floor to a wall or even a fabric, the biocide in STERI-7 kills Bacteria, Spores, Fungi, Viruses and Mould in seconds. But unlike any other disinfectant, STERI-7 incorporates a unique innovation called Reactive Barrier Technology.

Reactive Barrier Technology is a specialised micro emulsion which provides an optional sustained release system – this means that the Reactive Barrier can be switched on or off depending on the situation. It's simple, if you rinse STERI-7 after application you remove the Reactive Barrier, if you leave STERI-7 to dry you enable the Reactive Barrier Technology providing added biosecurity and protection between cleans.

How does the Reactive Barrier Technology work?

Spray STERI-7 on a surface and leave to dry. Seconds later STERI-7 has killed 99.9999% of harmful bacteria, viruses, fungi, spores and moulds. STERI-7 doesn't stop there. When STERI-7 has dried, a barrier is created which reactivates in the presence of any moisture.

For bacteria, viruses, fungi, spores and moulds to reproduce, they must contain moisture. However the moisture they need, even though microscopic, is enough to activate STERI-7's Reactive Barrier. Effectively the germs kill themselves. Pathogen suicide no less

We wanted to prove STERI-7 Reactive Barrier Technology could be used to promote Biosecurity, so we asked an Industry recognised analytical laboratory to put STERI-7 and the Reactive Barrier Technology to the test.

Using an adapted version of protocol EN 13697 under 'Dirty' test conditions, STERI-7 was diluted with hard water. Hard water weakens a disinfectant's efficacy. Spores, fungi and bacteria were chosen because these are some of the toughest pathogens to damage, never mind kill. If they could be killed under these conditions we knew STERI-7 could deal with almost anything.

The lab set their parameters. STERI-7 was sprayed onto stainless steel slides and left to dry. Once dried they were inoculated with selected bacteria, spores and fungi. After 1 minute contact time, the slides were swabbed with a dry sterile swab and analysed. STERI-7 killed the lot.

5 minutes later the same stainless steel slides were inoculated, left for then 1 minute contact time and then swabbed with a new dry sterile swab. Result? STERI-7 again killed the lot.

This procedure was repeated at 30 minutes, 60 minutes, and 72 hours later. Result? Guess what?

STERI-7 once again killed the re-inoculated pathogens.

What does this mean for you?

As has been proven, STERI-7's unrivalled Reactive Barrier Technology continues to be effective between cleans. And although it is extremely harmful to pathogens, it is not harmful to anything or anyone else.
All of STERI-7's ingredients have worldwide approval so as well as being safe to use, non-toxic and non-corrosive.

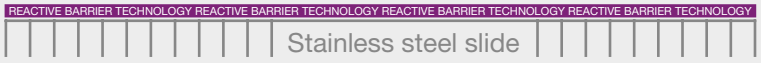
STERI-7 a genuine breakthrough in Biosecurity.

Step 1

Spray with STERI-7

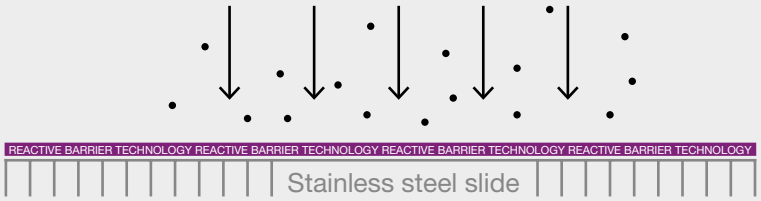
Step 2

Leave STERI-7 to dry enabling the
Reactive Barrier Technology



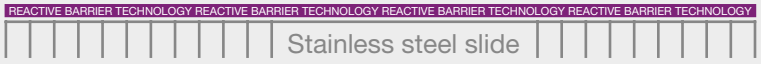
Step 3

Innoculate with Pathogen



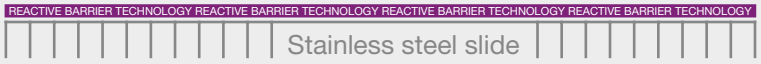
Step 4

After 1 minute, swab surface and analyse for Pathogen



Step 5

Result: No Pathogen



Repeat from Step 3 after 5 minutes, 30 minutes, 60 minutes and after 72 hours. BUT REMEMBER, THIS WHOLE PROCEDURE IS AFTER JUST ONE APPLICATION OF STERI-7

STERI-7

PROTECTION BETWEEN CLEANS

STERI-7 XTRA Concentrate

Technical Information: Healthcare & Medical Area Use

Product Description

STERI-7 XTRA Concentrate is formulated to be diluted and dispensed for high volume cleaning solutions. STERI-7 XTRA Concentrate is low-foaming which makes it ideal in cleaning and scrubbing machines. This also represents the most economical way to purchase as it can be diluted up to 1:50.

Recommended usage

The STERI-7 XTRA Concentrate can be used wherever the highest standards of disinfection is required and are suitable for use in healthcare and Medical Area and all other workplaces where there is a risk of cross contamination.
The product has been tested against and is effective against a number of commonly occurring bacteria, yeast and viruses that are known to be highly transmissible and can result in infections and illnesses.

Features and benefits

- Reactive Barrier Technology protection between cleans
- High level disinfectant cleaner
- Non-corrosive
- Non-residual organoleptic effect on food
- Low toxicity
- Effective in soft or hard water
- No reported resistance
- Triple active reducing need to rotate products
- Maintains efficacy in heavy organic soiling, blood and proteins

Characteristics

Perfume Free, colourless, liquid	
Active Ingredient	1.47% w/w Didecyldimethylammonium chloride 0.86% w/w Benzalkonium chloride 0.854% w/w Polyhexamethylene biguanide
Colour	Colourless, clear
Odour	Slight odour
Oxidising	Non-oxidising (by EC criteria)
Solubility in water	Soluble
Viscosity	Non-viscous
Flash point°C	>93
Relative Density	0.95 – 1.05
pH	Approx 7

Ingredients

CAS Number	Ingredient Name
7173-51-5	Didecyldimethylammonium Chloride
68424-85-1	Benzalkonium chloride
32289-58-0	Polyhexamethylenebiguanide

Instructions for use

High Level = 1:10 General use = 1:50 Fogging = 1:10 - 1:50. When used in STERI-7 BioMister for fogging, please refer to our BioMist Technical Information Sheet.

Regulatory compliance

The STERI-7 Concentrate is governed by the requirements of the Biocidal Product Directive (EU Regulation 98/8/EC). It is registered in every country that it will be sold. The product is labelled in accordance with the Biocidal Product Directive.

Safety Data Sheet

For information on safe handling an EC safety data sheet containing additional information is available on request for the STERI-7 XTRA Concentrate. Please contact your local STERI-7 representative.

Safe handling and storage

Wear suitable protective clothing and apparatus where appropriate. Avoid contact with eyes. Diluted STERI-7 XTRA Concentrate can be kept in a sealed container for up to 12 months. Full guidance on the handling and disposal of this product is provided in a separate Safety Data Sheet (see above).

STERI-7

PROTECTION BETWEEN CLEANS

Bactericidal Efficacy

EN 13727 –

Test objective

Suspension-based study formally used to evaluate bactericidal activity of products that are used in the medical area (e.g. hygienic handrub, hygienic handwash, surgical handrub, surgical handwash, instrument disinfection etc.)

Target organism	Contact Time	Dilution
Enterococcus hirae	1 mins	2%
Listeria monocytogenes	5 mins	2%
MRSA	5 mins	2%
Pseudomonas aeruginosa	1 mins	2%
Salmonella typhimurium	5 mins	2%
Staphylococcus aureus	1 mins	2%

EN 13697 –

Test objective

Chemical disinfectants and antiseptics — Quantitative non-porous surface test for the evaluation of bactericidal and/or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas — Test method and requirements without mechanical action (phase 2/step 2)

Target organism	Contact Time	Dilution
Enterococcus hirae	30 secs	2%
Listeria monocytogenes	30 secs	2%
EMRSA	5 mins	2%
MRSA	30 secs	2%
Pseudomonas aeruginosa	1 mins	2%
Salmonella typhimurium	30 secs	2%
Staphylococcus aureus	1 mins	2%
Escherichia coli	30 secs	2%

EN 13623 –

Test objective

Chemical disinfectants and antiseptics. Quantitative suspension test for the evaluation of bactericidal activity against Legionella of chemical disinfectants for aqueous systems. Test method and requirements (phase 2, step 1)

Target organism	Contact Time	Dilution
Legionella pneumophila	60 mins	0.2%
Legionella pneumophila	5 mins	2%

EN 16615 –

Test objective

EN16615 procedure. This is a quantitative test method for the evaluation of bactericidal and yeasticidal activity on non-porous surfaces, with mechanical action employing wiping with a cloth in the medical area (4-field test) Test method requirem (phase 2 step 2)

Target organism	Contact Time	Dilution
Pseudomonas aeruginosa	5 mins	10%
Staphylococcus aureus	5 mins	10%
Enterococcus hirae	5 mins	10%

EN 14561 –

Test objective

Chemical disinfectants and antiseptics — Quantitative carrier test for the evaluation of bactericidal activity of chemical disinfectants for instruments used in the medical area— Test method and requirements (phase 2, step 2)

Tested target organism	Contact Time	Dilution
Pseudomonas aeruginosa	30 mins	2%
Staphylococcus aureus	30 mins	2%
Enterococcus hirae	30 mins	2%

STERI-7 EXTRA HIGH LEVEL DISINFECTANT

STERI-7

PROTECTION BETWEEN CLEANS

Sporicidal Efficacy

EN 13697 –

Test objective

Chemical disinfectants and antiseptics – Quantitative non-porous surface test for the evaluation of bactericidal and/or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas – Test method and requirements without mechanical action (phase 2, step 2)

Tested target organism	Contact Time	Dilution
Clostridium Difficile	1 mins	2%
Bacillus subtilis	1 mins	2%

EN 13697 – Reactive Barrier Technology

Test objective

Chemical disinfectants and antiseptics – Quantitative non-porous surface test for the evaluation of bactericidal and/or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas – Test method and requirements without mechanical action (phase 2, step 2)

Tested target organism	Contact Time	Dilution
Clostridium Difficile	72 hrs	2%
Bacillus subtilis	72 hrs	2%

EN 13704 –

Test objective

Chemical disinfectants. Quantitative suspension test for the evaluation of sporicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas. Test method and requirements (phase 2, step 1).

Tested target organism	Contact Time	Dilution
Clostridium Difficile	1 mins	2%
Clostridium perfringens	5 mins	2%

Micobacterium Efficacy

EN 14348 –

Test objective

Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of mycobactericidal activity of chemical disinfectants in the medical area including instrument disinfectants – Test method and requirements (phase 2, step 1)

Tested target organism	Contact Time	Dilution
Mycobacterium terrae	30 mins	2%

EN 14563 –

Test objective

Chemical disinfectants and antiseptics - Quantitative carrier test for the evaluation of mycobactericidal or tuberculocidal activity of chemical disinfectants for instruments used in the medical area – Test method and requirements (phase 2, step 2)

Tested target organism	Contact Time	Dilution
Mycobacterium avium	3 mins	2%
Mycobacterium terrae	3 mins	2%
Mycobacterium fortuitum	3 mins	2%

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STERI-7

PROTECTION BETWEEN CLEANS

Yeast, Mould & Fungi Efficacy

EN 16615 –

Test objective

EN16615 procedure. This is a quantitative test method for the evaluation of bactericidal and yeasticidal activity on non-porous surfaces, with mechanical action employing wiping with a cloth in the medical area (4-field test) Test method requirem (phase 2 step 2)

Target organism	Contact Time	Dilution
Candida Albicans	5 mins	10%

EN 13697 –

Test objective

Chemical disinfectants and antiseptics — Quantitative non-porous surface test for the evaluation of bactericidal and/or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas — Test method and requirements without mechanical action (phase 2/step 2)

Tested target organism	Contact Time	Dilution
Candida Albicans	15 mins	2%
Aspergillus Niger	15 mins	2%

EN 13624 –

Test objective

Chemical disinfectants and antiseptics — Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity in the medical area— Test method and requirements (phase 2, step 1)

Tested target organism	Contact Time	Dilution
Candida Albicans	20 mins	10%
Aspergillus Niger	20 mins	10%

EN 14562 –

Test objective

Chemical disinfectants and antiseptics — Quantitative carrier test for the evaluation of fungicidal or yeasticidal activity of chemicaldisinfectants for instruments used in the medical area— Test method and requirements (phase 2, step 2)

Tested target organism	Contact Time	Dilution
Candida Albicans	20 mins	10%
Aspergillus Niger	20 mins	10%

Virucidal Efficacy

EN 14476 – Quantitative suspension test for virucidal activity (in vitro)

Test objective

Suspension-based study used as a presumptive test to evaluate virucidal activity.

Tested target organism	Contact Time	Dilution
Norovirus	5 -10 mins	10%-2%
Feline Calicivirus	5 -10 mins	10%-2%

ASTM E 1052 (7 Days) Bluetest Laborities

Test objective

The ASTM E1052 method is performed to determine the virucidal efficacy of a biocide against a test virus in suspension. The method may be used to establish the initial efficacy of several disinfectant active concentrations at various selected contact times. It is also used to determine the anti-viral effectiveness of liquid hand soaps, over-the-counter (OTC) topicals, and other antiseptics designed for use on the skin. The test is conducted according to the standards and methods accepted by the US Environmental Protection Agency (EPA) and Food and Drug Administration (FDA) for registration of the product as a virucidal agent.

Tested target organism	Contact Time	Dilution
Bovine viral diarrhea virus	5 mins	2%
Hepatitis C	5 mins	2%
Influenza A virus H1N1	5 mins	2%
SARS virus	5 mins	2%
HIV 1	5 mins	2%

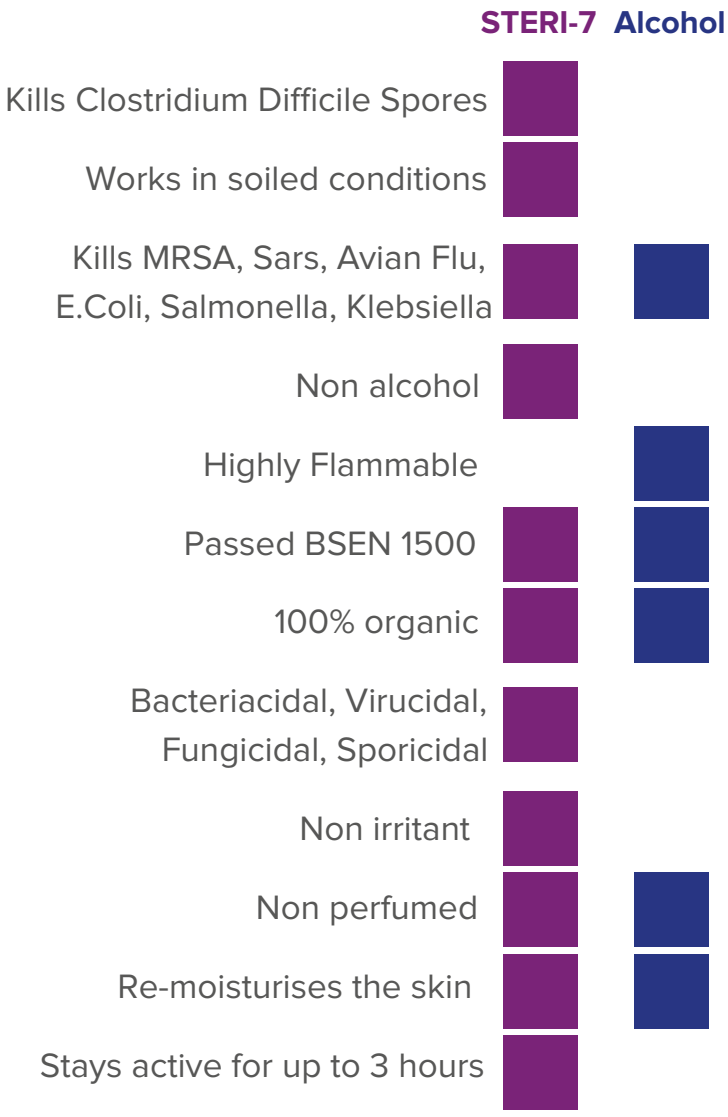
AHVLA –

Tested target organism	Contact Time	Dilution
Avian Flu	30 mins	5%
NDV	30 mins	5%

STERI-7 EXTRA HIGH LEVEL DISINFECTANT

STERI-7 is a high-level, broad spectrum, one stage disinfectant cleaner. When applied to any surface from a floor to a wall or even a fabric, the biocide in STERI-7 kills Bacteria, Spores, Fungi, Viruses and Mould in seconds. But unlike any other disinfectant, STERI-7 incorporates a unique innovation called Reactive Barrier Technology. Reactive Barrier Technology is a specialised micro emulsion which provides an optional sustained release system – this means that the Reactive Barrier can be turned on or off depending on the situation. It's simple, if you rinse STERI-7 after application you remove the Reactive Barrier, if you leave STERI-7 to dry you enable the Reactive Barrier Technology giving you added biosecurity and protection between cleans.

Scientifically proven using independent laboratories



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Ready To Use (RTU)

Code	Description
STERI7001	S-7 750ml Professional RTU
STERI7002	S-7 750ml Professional RTU Lemon
STERI7003	S-7 5ltr Professional RTU
STERI7004	S-7 5ltr Professional RTU Lemon

Concentrates

Code	Description
STERI7005	S-7 1 Litre Concentrate Dosing Bottle
STERI7006	S-7 1 Litre Concentrate Dosing Bottle Lemon
STERI7007	S-7 5ltr Concentrate
STERI7008	S-7 5ltr Concentrate Lemon
STERI7009	S-7 20ltr Concentrate
STERI7010	S-7 20ltr Concentrate Lemon

STERI-7 EXTRA HIGH LEVEL DISINFECTANT

Wipes

Code	Description
STERI7011	S-7 80 Wipes Flat Pack (Pillow)
STERI7026	S-7 Clinical Wipes PK 40 (Pillow)
STERI7012	S-7 200Tub Wipes
STERI7013	S-7 800 Bucket Wipes x 800

Hand Rub

Code	Description
STERI7014	S-7 75ml Surgical Level Hand Rub
STERI7016	S-7 600ml Surgical Level Hand Rub
STERI7018	S-7 800ml Surgical Level Hand Rub
STERI7020	S-7 5ltr Surgical Level Hand Rub
STERI7015	S-7 75ml Medical Level Hand Rub
STERI7017	S-7 600ml Medical Level Hand Rub
STERI7019	S-7 800ml Medical Level Hand Rub
STERI7021	S-7 5ltr Medical Level Hand Rub
STERI7025	S-7 Biocidal Hand Rub 75ml

Hand Wash

Code	Description
STERI7022	S-7 600ml Biocidal Hand Wash
STERI7023	S-7 800ml Biocidal Hand Wash Cartridge
STERI7024	S-7 5ltr Biocidal Hand Wash

STERI-7 HALO HIGH LEVEL DISINFECTANT

Imagine a disinfectant more powerful than bleach...
Imagine 99.9999% sterilising effectiveness in just 15 seconds...
Imagine if it was safe enough it can be used to treat drinking water...
Imagine the possibilities... Stop imagining; meet...

STERI-7 HALO

BREAK TREAT PREVENT

it's a revolution

Better than hypochlorite or peracetic acid, exceptionally rapid in action enabling effective sanitising with low contact times against pathogens such as E. coli Botrytis, Campylobacter jejuni, Salmonella, Listeria, Shigella, Staphylococcus and sproe based pathogens such as C. difficile.

Concentrate

Code	Description
STERI7HALO003	Steri 7 Halo 4000 Concentrate 2L Bottle
STERI7HALO004	Steri 7 Halo 4000 Concentrate 5L Bottle
STERI7HALO005	Steri 7 Halo 4000 Concentrate 25L Bottle

Ready To Use (RTU)

Code	Description
STERI7HALO019	Steri 7 Halo 400 RTU 2L
STERI7HALO020	Steri 7 Halo 400 RTU 5L
STERI7HALO022	Steri 7 Halo 400 RTU 25L
STERI7HALO030	Steri 7 Halo 200 RTU 2L
STERI7HALO031	Steri 7 Halo 200 RTU 5L

STERI-7 HALO HIGH LEVEL DISINFECTANT

STERI-7 HALO TECHNOLOGY

The active ingredient in all Biomimetics Health Industries formulations is a unique form of Hypochlorous acid. Hypochlorous acid is generated in very low concentrations (ppm – parts per million) by the body to power the human immune system. Although non-toxic, it is the most effective oxidizing agent known to man. STERI-7 HALO formulations replicate this chemistry - and extrapolate its performance. All STERI-7 HALO formulations are rapidly sporicidal, Virucidal, fungicidal and bactericidal. At low concentrations, STERI-7 HALO rapidly kills the most dangerous pathogens, yet is pH neutral and non-toxic to healthy skin. At high concentrations (up to 4,000ppm), STERI-7 HALO is suitable for decontamination applications where a high level of biological load is present or for high volume dosing requirements such as water treatment.

Sporicidal efficacy

UCLH Speed of kill trial:
Quantitative suspension test to assess the efficacy of STERI-7 HALO in the destruction of Clostridium difficile 027 spores. Conducted by Dr Ginny Moore, UCLH. Test organism: Clostridium difficile 027.

Organisms were exposed to 2,000ppm STERI-7 HALO. Method: Test reactions were set up by adding 1 ml spore suspension to 9 ml of the STERI-7 HALO solution - this mixture was stirred regularly. At 15, 30, 60 seconds, 1.30, and 2 minutes, 100ul of the test reactions were removed into 900ul of neutralizer. This sampling aliquot was allowed to stand for approximately 2 minutes after which it was cultured for total viable counts. Counts were run in duplicate. Brazier's Agar plates were used and read after 48 hours incubation at 37°C in an anaerobic environment, and the concentration of viable C. difficile calculated.

Requirement:
As high a log reduction, as quickly as possible.

Results/Conclusion:
"STERI-7 HALO at a concentration of 2000ppm demonstrated a kill rate of between 6 log^{10} and 7 log^{10} (99.9999%) of C. difficile (027) spores within 15 seconds".

>99.9999%
Log reduction within 15 seconds against
C. difficile 027

BS EN13704:
Quantitative suspension test to establish sporicidal activity of chemical disinfectants within the medical area (Phase 2, Step 1 sporicidal test). Conducted by Tina Bradley, Hospital Infection Research Laboratory. Test organism: Bacillus subtilis var niger NCTC 10073. Interfering substances – Clean Conditions: 0.03% w/v bovine albumin (final concentration). Dirty Conditions: 0.3% w/v bovine albumin (final concentration) plus 0.3% v/v washed sheep erythrocytes. Organisms were exposed to 2,000ppm STERI-7 HALO.

Requirement:
3 log^{10} reduction in 60 minutes in clean and dirty conditions. Results: 2,000ppm STERI-7 HALO achieved in excess of 6.70 log^{10} reduction within 1 minute in clean conditions and 4.82 log^{10} reduction within 1 minute in dirty conditions.

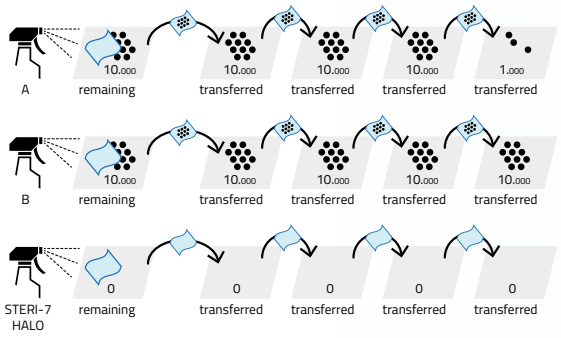
Conclusions:
"Tests carried out with STERI-7 HALO at a concentration of 2,000ppm under clean (0.03% w/v albumin) and dirty (0.3% w/v albumin and 0.3% v/v sheep erythrocytes) conditions demonstrated a >3 log^{10} reduction against spores of Bacillus subtilis at 20°C within 1 minute, and a >6 log^{10} reduction within 1 minute under clean conditions and 5 minutes under dirty conditions. Published EN tests for sporicidal activity i.e. EN 13704 have a requirement for a >3 log^{10} reduction in 60 minutes. This was achieved in clean and dirty conditions within 1 minute".

UCLH wipe transfer study:
Comparison of STERI-7 HALO to the two best performing wipe products in use in the UK NHS. Conducted by Dr Ginny Moore, UCLH, 2011. Clean test surfaces (5x5cm2) were seeded with approximately 107 spores of an outbreak strain of Clostridium difficile 027 and wiped clean with a microfiber cloth. This cloth was then used to wipe four clean test surfaces consecutively. In all cases, cloths were

pre-treated with one of three disinfectants: Product A (Chlorine dioxide based), Product B (Chlorine based) and STERI-7 HALO (chemically generated Hypochlorous Acid) and compared against tap water (control). A suspension test was also performed under BS EN 13704 conditions to test the sporicidal activity of all disinfectants.

Results/ Conclusion:
All three disinfectants satisfied the requirements of the BS EN 13704 standards and were able to reduce the spore counts by more the 3 logs within a 60 minutes contact time. Spore counts fell below the detection limit within seconds when treated with STERI-7 HALO and after 3 and 5 minutes of contact time with Product A and Product B respectively.

Cleaning a surface contaminated with approximately 7 log^{10} C. difficile 027 spores with a microfiber cloth pre-treated with the disinfectants resulted in product A and B leaving 3-4 log^{10} spores remaining on the surface after cleaning – similar to the number of spores remaining when no disinfectant was used. These cloths spread 3-4 log^{10} spores to four sterile surfaces subsequently wiped with the same cloths. The STERI-7 HALO wiper left no spores remaining on the contaminated surface and eliminated the transference of spores to the four subsequently wiped sterile surfaces.



Tests conducted by Dr G. Moore Environmental Laboratory - University College London Hospitals. April 2011

Testing of Sporicidal wipes against C. difficile – Cardiff University:
Comparison of STERI-7 HALO treated wipes to the results of the Siani et al (American Journal of Infection Control 2011), paper conducted by Jean Yves Maillard – Cardiff University. Testing replicated the 3 stage protocol of the 2011 Siani et al paper, comprising:

a) the ability of the wipe to remove the bioburden from the surface,

b) the ability of the wipe to transfer bioburden and

c) the sporicidal activity of the formulation within the wipe. Test organism: Clostridium difficile NCTC 12727. Interfering substances – 3 g/L bovine serum albumin.

Results/ Conclusion:
The STERI-7 HALO impregnated wipe removed more spores of C. difficile than the best performing wipe in the Siani et al paper, achieving 5.28 log^{10} +/- 0.00 in both clean and dirty conditions. It achieved greater sporicidal activity at 10 seconds and 5 minutes than any of the other wipes in the Siani test and it transferred zero spores in dirty conditions. The STERI-7 HALO impregnated wipe performed better than any other wipe previously tested using the Siani methodology.

BS EN13704:
Quantitative suspension test to establish sporicidal activity of chemical disinfectants within the medical area (Phase 2, Step 1 sporicidal test). Conducted by Tina Bradley, Hospital Infection Research Laboratory. Test organism: Clostridium difficile NCTC 11209. Interfering substances – Clean Conditions: 0.03% w/v bovine albumin (final concentration). Dirty Conditions: 0.3% w/v bovine albumin (final concentration) plus 0.3% v/v washed sheep erythrocytes. Organisms were exposed to 2,000ppm STERI-7 HALO.

Requirement:
3 log^{10} reduction in <60 mins. in clean and dirty conditions. Results: 2,000ppm STERI-7 HALO achieved in excess of 5.64 log^{10} reduction within 1 minute in clean and dirty conditions.

Conclusion:
"Tests carried out with STERI-7 HALO at a concentration of 2,000ppm under clean (0.03% w/v albumin) and dirty (0.3% w/v albumin and 0.3% v/v sheep erythrocytes) conditions demonstrated a >5 log^{10} reduction against spores of Clostridium difficile at 20°C within 1 minute.

Virucidal efficacy

BS EN14476:
2005 quantitative test in virucidal suspension for chemical disinfectants and antiseptics. Conducted by Eurofins Biolab SRI. Test organisms: Polio virus Type 1 LSc-2ab and Adenovirus type 5 – ATCC VR-5. Interfering substances 0.03% bovine albumin (clean conditions) and 0.3% bovine albumin and sheep's erythrocytes (dirty conditions) – all final concentrations. Organisms were exposed to 2,000ppm STERI-7 HALO.

Requirement:
4 log10 reduction in <60 minutes in clean conditions.

Results:
2,000ppm STERI-7 HALO achieved in excess of 4 log^{10} reduction within 30 seconds in clean and dirty conditions.

Conclusion:
"STERI-7 HALO causes a reduction >4 log with the test conditions using a 0.03% final concentration of bovine albumin, in compliance with EN14476:2005 +A1:2006".

Yeasticidal and fungicidal efficacy

BS EN 1275 (2005):
Quantitative suspension test of fungicidal or yeasticidal activity of chemical disinfectants and antiseptics – Phase 1. Conducted by Eclipse Scientific. Test organisms: Candida

albicans NCTC 3179 and A. niger NCTC 2275. Interfering substances – none. Organisms were exposed to 400ppm and 600ppm STERI-7 HALO.

Requirement:
4 log^{10} reduction within 15 minutes in clean conditions.

Results:
400ppm and 600ppm STERI-7 HALO achieved in excess of a 4.0 log^{10} reduction within the required contact time.

Conclusion:
"According to BS EN1275:2005 the above referenced batch(s) of product does possess fungicidal activity when tested using the conditions referenced above".

BS EN1650:
2008 Quantitative suspension test for the evaluation of fungicidal activity of chemical disinfectants and antiseptics (Phase 2, Step 1). Conducted by MGS Laboratories. Test organisms: Candida albicans ATCC 10231. Interfering substances – 0.3 g/l bovine albumin. Organisms were exposed to 100ppm STERI-7 HALO.

Requirement:
4 log^{10} reduction within 15 minutes in clean conditions.

Results:
100ppm STERI-7 HALO achieved > 4.22 log^{10} reduction in 30 seconds.

Conclusion:
"Based on EN 1650 (2008), the STERI-7 HALO product (100ppm), when tested at RTU, possesses yeasticidal activity in 30 seconds, 1 minute and 15 minutes at 20oC under clean conditions for the referenced strain of C. albicans".

Bactericidal efficacy

BS EN1040 2005:
Suspension test for basic bactericidal activity of chemical disinfectants and antiseptics (Phase 1). Conducted by Eclipse Scientific.

Test organisms:
Staphylococcus aureus (NCTC10788) and Pseudomonas aeruginosa (ATCC 15442). Organisms were exposed to 400ppm and 600ppm STERI-7 HALO.

Requirement:
5 log^{10} reduction in 5 minutes in clean conditions.

Results:
Both 400ppm and 600ppm STERI-7 HALO achieved in excess of a 5 log10 reduction within the required contact time.

Conclusion:
"According to BS EN1040 2005: the product possesses bactericidal activity when tested using the conditions referenced above".

BS EN13727 2003:
Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used for instruments in the medical area. (Phase 2, step 1). Conducted by Tina Bradley, Hospital Infection Research Laboratory. Test organisms: Staphylococcus aureus (NCTC 10788), Pseudomonas aeruginosa (NCTC 6749), Enterococcus hirae (NCTC 12367). Interfering substances - Clean Conditions: 0.03% bovine concentration) plus 0.3% sheep erythrocytes. Organisms were exposed to 600ppm STERI-7 HALO.

Requirement:
5 log^{10} reduction in 60 minutes in clean and dirty conditions.

Results:
600ppm STERI-7 HALO achieved >6.85 log10 reduction against Staphylococcus aureus, >5.95 log10 reduction against Pseudomonas aeruginosa and > 6.74 log10 reduction against Enterococcus hirae in less than one minute in clean conditions, and within the required contact time against all test organisms in dirty conditions.

Conclusion:
"When tested in accordance with EN 13727 (2003), 600ppm STERI-7 HALO possesses bactericidal activity at 20oC under clean (0.03% albumin) and dirty (0.3% albumin/ 0.3% sheep erythrocytes) conditions. A >5 Log10 (99.999%) reduction was achieved with all test organisms within the obligatory contact time of 60 minutes. This was achieved within 1 minute under clean conditions for the three test organisms ie Staphylococcus aureus, Pseudomonas aeruginosa and Enterococcus hirae. 600 ppm STERI-7 HALO, therefore, complies with the requirements described in EN 13727".

BS EN1276 2009:
Chemical disinfection and antiseptics – quantitative suspension test for evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas – Phase Two, Step One. Conducted by MGS Laboratories. Test organisms: Staphylococcus aureus (ATCC 65388) and Pseudomonas aeruginosa (NCIMB 10421). Interfering substances - 0.3 g/l bovine albumin. Organisms were exposed to 100ppm STERI-7 HALO.

Requirement:
5 log^{10} reduction within 5 minutes.

Results:
100ppm STERI-7 HALO achieved > 5 log10 reduction within 30 seconds.

Conclusion:
"Based on EN 1276 2009, the STERI-7 HALO (100ppm) when tested at RTU, possesses bactericidal activity in 30 seconds, 1 minute and 15 minutes at 20oC under clean conditions for the referenced strains of S. aureus and P. aeruginosa".

BS EN1276 1997:
Chemical disinfection and antiseptics – quantitative suspension test for evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas – Phase Two, Step One. Conducted by Tina Bradley, Hospital Infection Research Laboratory. Test organisms: Enterococcus hirae (NCTC 12367) and Escherichia coli (NCTC 10418). Organisms were exposed to 100ppm STERI-7 HALO.

Requirement:
5 log10 reduction within 5 minutes.

Results:
100ppm STERI-7 HALO achieved > 7 log10 reduction within 30 seconds.

Conclusion:
"When tested in accordance with a modified EN1276 (1997), STERI-7 HALO at 100ppm possesses bactericidal activity at 20oC under clean (0.03% albumin) conditions. A >5 log10 (99.999%) reduction was achieved with both test organisms within 30 seconds under clean conditions".

BS EN1276 2009:
Chemical disinfection and antiseptics – quantitative suspension test for evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas (Phase 2, step 1). Conducted by MGS Laboratories. Test organisms: Bacteroides fragilis (NCTC 9343). Organisms were exposed to 200ppm STERI-7 HALO.

Requirement:
5 log10 reduction within 15 minutes.

Results:
200ppm STERI-7 HALO achieved > 5.0 log10 reduction within 30 seconds.

Conclusion:
"Based upon EN1276 (2009) the product when tested at RTU, possesses bactericidal activity at 30 seconds, 1 minute and 15 minutes at albumin (final concentration). Dirty Conditions: 0.3% bovine albumin (final 20 C under clean conditions for the referenced strain of B. fragilis".

BS EN1276 2009:
Chemical disinfection and antiseptics – quantitative suspension test for evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas. Conducted by Dr Ginny Moore, ULCH. Test organisms: Streptococcus pyogenes GpA ATCC 19615. Interfering substances - clean conditions: phosphate-buffered-saline solution. Dirty conditions: 0.3% w/v bovine serum albumin. Organisms were exposed to 500ppm, 1,000ppm and 1,500ppm of STERI-7 HALO.

Requirement:
5 log^{10} reduction within 60 minutes in clean conditions only.

Results:
500ppm, 1,000ppm and 1,500ppm STERI-7 HALO achieved in excess of an 8.9 log10 reduction within one minute in both clean and dirty conditions.

Conclusion:
"In a suspension test, STERI-7 HALO hypochlorous acid solution at 500, 1000 and 1500ppm is an effective microbicide against Streptococcus pyogenes GpA under clean and dirty conditions and can achieve an 8.9 log reduction in colony counts within seconds of contact time".

BS EN14348:
Quantitative suspension test for the evaluation of mycobactericidal activity of chemical disinfectants and antiseptics used in the medical area including instrument disinfectants (Phase 2, Step 1). Conducted by Tina Bradley, Hospital Infection Research Laboratory. Test organism: Mycobacterium terrae NCTC 10856. Interfering substances – Clean Conditions: 0.03% bovine albumin (final concentration). Dirty Conditions: 0.3% bovine albumin (final concentration) plus 0.3% sheep erythrocytes. Organisms were exposed to 2,000ppm STERI-7 HALO.

Requirement:
4 log^{10} reduction in < 60 mins. in clean and dirty conditions.

Results:
2,000ppm STERI-7 HALO achieved in excess of 7.08 log10 reduction within 1 minute in both clean and dirty conditions.

Conclusion:
"When tested in accordance with the methodology described in EN 14348 STERI-7 HALO at a concentration of 2,000ppm under clean (0.03% w/v albumin) and dirty (0.3% w/v albumin and 0.3% v/v sheep erythrocytes) conditions demonstrated a >7 log10 reduction against Mycobacterium terrae within 1 minute. STERI-7 HALO therefore fulfils the tuberculocidal requirements described in EN14348 under clean and dirty conditions".

In-vivo performance

BS EN13697: Efficacy as a fogging agent.
Tests at Campden BRI using PDX fogging equipment were conducted to evaluate the efficacy of STERI-7 HALO against a range of micro-organisms using Campden's whole room disinfection model - an industry accepted procedure based upon standardised non-porous surface disinfection test BS EN13697: 2001. Test organisms: Candida albicans, Staphylococcus aureus, Aspergilus niger, Clostridium difficile, Listeria monocytogenes, Mycobacterium terrae, Bacillus subtilis, Bacillus cereus. Test organisms were exposed to 4000ppm STERI-7 HALO delivered into a 43m^3 test chamber, over a period of 60 minutes. Testing conducted by Dr David Crouch (PDX) and Mr Lawrence Staniforth (Camden BRI). All results are quoted for an exposure time of 60 minutes (as per CEN13697 standards). STERI-7 HALO was experimentally proven not to be degraded in any way when used with PDX technology.

STERI-7 HALO HIGH LEVEL DISINFECTANT

Requirement:
3 log^{10} reduction within 15 minutes.

Conclusion:
The table below demonstrates the log reductions achieved.

	Average microbial reductions achieved (log10)		
Micro- organism	Initial count CFU / ml	Final count CFU / ml	Log reduction
Candida albicans	1.54 x 10	>15	>7.30
Staphylococcus aureus	1.88 x 10	>10	>7.26
Aspergillus niger	2.10 x 10	>15	>5.32
Clostridium difficle	6.30 x 10	>15	>5.80
Listeria monocytogenes	1.06 x 10	>15	>7.02
Mycobacterium terrae	1.10 x 10	>10	>4.86
Bacillus subtilis	2.92 x 10	>15	>7.64
Bacillus cereus	1.12 x 10	>15	>4.88

BS EN13697:
Efficacy compared to alternative fogging chemistries
Additional testing was conducted at Campden BRI using PDX fogging equipment to compare the efficacy of STERI-7 HALO against a range of competitive fogging chemistries. Again Campden's whole room disinfection procedure for non-porous surface disinfection testing (BS EN 13697: 2001), was employed. Test organisms: Staphylococcus aureus, Bacillus subtilis & Bacillus globigii and Clostridium difficile. Organisms were exposed to 4000ppm STERI-7 HALO via delivering 4.3 litres of STERI-7 HALO chemistry into a 43m^3 test chamber, containing the test organisms.

Result:

	EN13697 Compliant (Log10 reduction achieved)		
Chemistry	Staphylococcus aureus	Bacillus subtilis var. globigii	Clostridium difficile
Peractic Acid	Yes (6.10)	Yes (5.85)	Yes (4.51)
Quat Ammonium	Yes (4.50)	No	No
Ozone	Yes (5.22)	No	No
Hydrogen Peroxide	No	No	Yes (3.74)
Peroxygen Acid Ester	Yes (6.37)	Yes (3.07)	Yes (4.37)
Chlorine Dioxide	No	No	No
Alkaline Paracetic Acid	Yes (5.62)	Yes (5.32)	Yes (4.90)
STERI-7 HALO	Yes (7.26)	Yes (7.46)	Yes (5.8)

Testing at Campden BRI using PDX fogging equipment

All results are quoted for an exposure time of 60 minutes (CEN13697 standards) - however in all cases STERI-7 HALO achieved the maximum microbial reduction within a 15 minute exposure window. Testing conducted by Dr David Crouch (PDX) and Mr Lawrence Staniforth (Camden BRI).

Requirement:
3 log^{10} reduction within 15 minutes.

Conclusion:
4000 ppm STERI-7 HALO achieved greater microbiological reductions against all specified organisms than each of the competitor chemistries evaluated.

The speed of action of STERI-7 HALO when fogged with PDX equipment was demonstrated by the time taken to achieve its maximum biological reduction against C. difficile and Mycobacterium terrae: under 5 minutes. Even at lower concentrations (2000ppm) fogged STERI-7 HALO performs significantly faster than traditional, more toxic, chemistries such as peracetic acid.

Eradication of Legionella and Pseudomonas in drinking/ process water

STERI-7 HALO complies with EC Biocidal Products Directive (BPD) (98/8/EC) for use in both drinking water and process water at up to 5ppm. 'Shock' dosing at 2ppm causes rapid removal of bio-films and subsequent maintenance dosing, typically at less than 1ppm, keeps all counts below detectable limits. Independent microbiological testing has proven STERI-7 HALO to be more effective in the removal of bio-films, Legionella, Pseudomonas and TVC's than chlorine dioxide or copper silver treatments. Government guidelines on the treatment of Legionella (publication L8), are currently being re-written to endorse the use of STERI-7 HALO for water treatment applications.

STERI-7 HALO as an ultrasonic cleaning agent

Testing conducted by Dr. Paul Humphreys at Huddersfield University shows 400ppm STERI-7 HALO to achieve a total kill (6 log^{10} reduction) in under one minute when used as a sanitising agent in an ultrasonic bath. Test protocol: EN13697. Test organism: Bacilus subtilis spores. It is believed likely that further testing will demonstrate the same efficacy can be delivered using lower concentrations of STERI-7 HALO.

Safety

STERI-7 HALO contains no alcohol, is non-flammable, has no COSHH implications and causes no harm to the environment. At low concentrations it offers a skin neutral pH and is non-sensitising to skin or eyes. At higher concentrations it can be used in industrial applications without the use of PPE or having to be transported as a hazardous substance.

	Chemicals Hazard Information & packaging (CHIP)	
	Symbol	Risk phrase
STERI-7 HALO 4000	Irritant	Eye irritant
STERI-7 HALO 2000	N/A	None
STERI-7 HALO 1000	N/A	None
STERI-7 HALO 800	N/A	None
STERI-7 HALO 700	N/A	None
STERI-7 HALO 600	N/A	None
STERI-7 HALO 500	N/A	None
STERI-7 HALO 250	N/A	None

Toxicology / Mutagenicity

Full independent toxicity human risk assessment conducted on 2,000ppm STERI-7 HALO concluded that STERI-7 HALO at its stated formulation (<1% calcium hypochlorite in water, 2000 ppm afc), is neither a skin nor eye irritant and presents no risk to human health if used as intended. Full bacterial reverse mutagenicity testing has proven STERI-7 HALO 2000 to be completely non-mutagenic. This was conducted by exposing specially selected strains of Salmonella typhimurium and E. coli to STERI-7 HALO 2000 and incubating both bacteria and test substance in the absence and presence of a supplemented homogenate fraction (S9 mix). The substance was then evaluated for base change mutagens: S. typhimurium TA1535 and TA100, and E. coli WP2 uvrA (pKM101) and frameshift mutagens: S. typhimurium TA1537 and TA98. All testing was conducted in compliance with the UK Good Laboratory Practice Regulations (Statutory Instrument No. 3106), the OECD Principals of Good Laboratory Practice ENV/MC/CHEM (98) 17 and EC Commission Directive 2004/10/EC. The mutagenicity study was conducted in compliance with: OECD Guidelines for the Testing of Chemicals (1997). Genetic Toxicology: Bacterial Reverse Mutation Test, Guideline 471. EC Commission Regulation No. 440/2008. Method B.13/14: Mutagenicity - Reverse mutation test using bacteria. OJ L 142/248. US EPA Health Effects Test Guidelines (1998). OPPTS 870.5100 Bacterial reverse mutation test. EPA 712-C-98-247.

Inhalation Toxicity

Evaluations conducted at HSE Buxton to assess low-level chlorine (Cl2) emissions from STERI-7 HALO following its delivery from PDX vapour jet technology into a 34m3 test chamber. Varying concentrations of STERI-7 HALO (100, 1000, 2000 & 4000ppm) were used to assess levels of chlorine gas generated from the fogging process and from treated surfaces. Measurements were taken using a Portasens II monitor containing a connected via Teflon tubing to 6 locations within the chamber and a MultiRAE portable gas monitor with a chlorine sensor. Experiments were conducted over two days (21-22 August 2012).

Results/ conclusion

Ten fumigation runs were conducted. The data from both the Portasens II and the MultiRAE show that under the described experimental conditions there is no evidence of any off gassing of chlorine gas from any of surfaces present in the chamber during testing. The MultiRAE sensor detected 0-0.1ppm chlorine gas after the purge phase from the highest concentration (4000ppm, 2 minutes delivery) however the short term (15 minute) workplace exposure limit for chlorine is 0.5ppm (EH40-2005) therefore even when misting 4000ppm, STERI-7 HALO is safe to use for single room misting applications (e.g. hospital rooms), as rooms would not be occupied during the misting process. STERI-7 HALO therefore presents no occupational health hazard.

STERI-7 HALO Chemistry

All Biomimetics formulations are manufactured via a patent pending chemical process and are available in a range of strengths up to 4000ppm. The chemical composition of STERI-7 HALO is unique and enables the hypochlorous content to exist across a far wider pH band than has previously been possible: compared to traditional active halogen solutions, STERI-7 HALO offers greater purity, stability, efficacy and safety, together with reduced corrosion.

Physical/chemical properties of STERI-7 HALO:

State:	Liquid Colour: Colourless
Odour:	Characteristic odour (chlorine)
pH:	5.5 - 3.0 dependent upon ppm
Description:	Clear-aqueous
CAS No:	Hypochlorus acid: 7790-92-3

Materials Compatibility

Independent corrosion and compatibility testing has been conducted on a wide range of materials including aluminium, anodised aluminium, mild steel, galvanised steel, 304 stainless steel, 316 stainless steel, polypropylene, rubber, HDPE and multiple soft furnishings including vinyl fabrics and floor coverings. After 8 weeks continuous immersion in 5000ppm STERI-7 HALO neither 304 nor 316 stainless steel displayed any sign of corrosion. After 6 weeks immersion, mild steel and aluminium both demonstrated less corrosion than equivalent concentrations of sodium hypochlorite. Testing on soft furnishings conducted by Intertek and Cleaning Research International demonstrated STERI-7 HALO 1,000ppm to cause no change in colour or tear strength on a wide range of fabrics and only one change in shade of colour of one fabric when wet rubbed. Tests used included: Colour Change: BS EN 20105-A02:1995, Dry Rubbing: BS EN 105-X12:2002, Wet Rubbing: BS EN ISO 105-X12:2002 and Tear Strength: BS EN ISO 13937-1: 2000. STERI-7 HALO at 1,000ppm is also accredited with the Wool Safe Mark.

Quality Control

All Biomimetics formulations are manufactured to exacting standards in our dedicated UK facility. The facility is certified with BS EN ISO 13485:2003 accreditation and is approved for the manufacture of Class III Medical Devices in clean room conditions. All batches of product are manufactured using the same process, and are verified for free available Chlorine (ppm), pH and purity. Validation samples are retained for all batches.

Stability

All Biomimetics formulations have been tested for ppm, pH and antimicrobial efficacy in both real time and accelerated conditions in order to ensure they meet applicable guidelines when aged. All standard strengths of product have been demonstrated to be stable and effective for one (1) year.

Sectors of Activity

Biomimetics Health Industries are currently working within the following sectors: water treatment, human and animal healthcare, healthcare infection control, post harvest decontamination, food and beverage processing, life science clean-room and healthcare laundry.

STERI-AIR-80 Dry Aerosol Generator

DRY AEROSOL FEATURES

The air represents one of the most insidious carriers of airborne bacterial flora diffusion in enclosed environments, and it is common knowledge that such a spread has always represented a serious problem for people working in enclosed environments. Among the various methods of disinfection tested and implemented, the technique of aerosolization results to be the most reliable from the scientific point of view and the most profitable. The above technique is implemented by an apparatus the name of which is STERI-AIR-80.

Code	Description
FOG010	Steri-Air-80 Dry Aerosol Generator

STERI-AIR-80 is a dry aerosol generator, so designed as to grant the mechanical transition of a liquid solution from the static state to the dynamic state of a colloidal dispersion. This means producing real and dry aerosol, the characteristics of which strictly refer to the codification of the International Pharmacopoeia.

This result is mechanically obtained by exploiting the phenomena of friction and rubbing, of which the physical method of aerosol formation consists in. **STERI-AIR-80** has been studied so as to emit a mixed (aerosolic and hyperaerosolic) suspension in the following proportion of diameter of micelles: from 0.5 to 5 microns 33 per cent; from 5 to 10 microns 44 per cent; from 10 to 15 microns 23 per cent (monitored by micro photography on a dielectric capillary wire), with a total delivery capacity of 15 ml. of liquid at D-1.

Thanks to this micelle proportioning it is possible to disinfect the environmental air as well as the exposed surfaces.

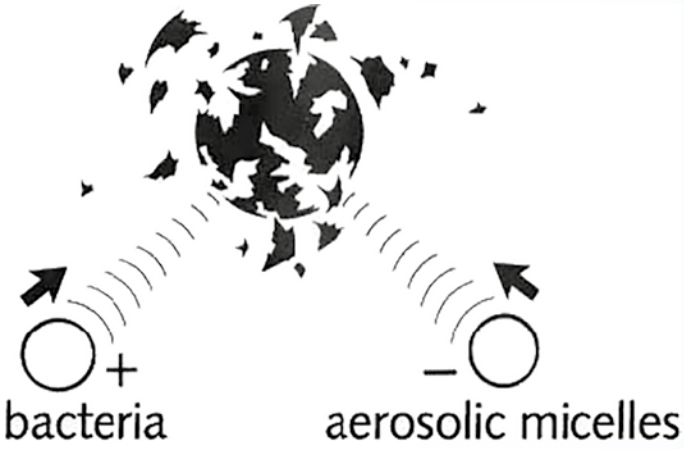
As a matter of fact, micelles up to 5 microns tend to remain suspended in the air, while the others, greater in diameter, tend to lay down (pseudo contact) on the exposed surfaces. Furthermore, allowance has been made for the fact that in the dipolar system of bacterial cellular membranes the electrostatic charges are oriented with their negative signs towards the protoplasm and their positive signs towards the exterior. For that reason, a germicidal aerosol with negatively ionized micelles favours the attraction and, consequently, the active contact of the opposite micro-organic entities.

In this way, unlike traditional disinfection systems where the effectiveness of the disinfectant develops only and exclusively after contact, **STERI-AIR-80** uses a new principle based on the “aerial” vulnerability of aerobic micro-organisms and operating on them even on the basis of molecular attraction. Thanks to their microbic dimensions (due to the formation system which determines their electric charges) , the micelles acquire very high speed in the atmosphere and possess a continuous , rapid movement called “Brownian movement”, which allows the aerosol to expand in all directions at a speed of about 50 metres per minute and to stay in suspension for a period ranging from 6 to 8 hours, the precipitation times being of 8 cm. in 4 hours.

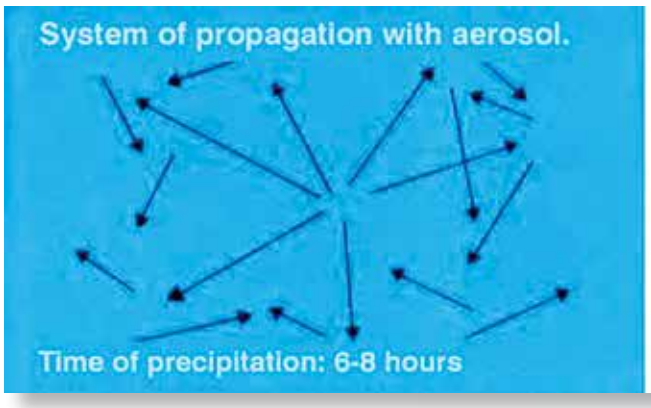
Furthermore, the microbic dimensions of the micelles provides them with a paradoxical state of dryness so that the aerosolic ultra dispersion of liquid spherules by a gaseous vehicle (air) is neither wet nor wettable. This is possible since aerosolic spheres of the above-mentioned dimensions have such a superficial tension as to form an elastic sheath which transforms the micelle into a kind of microscopic bouncing ball,

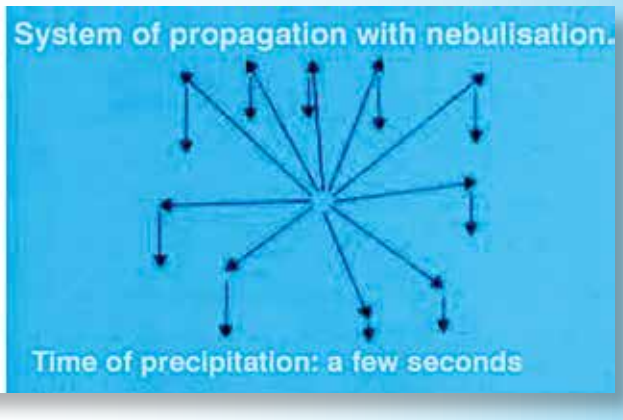
which does not “burst” while touching a solid surface, and for that reason it does not wet and it is not wettable.

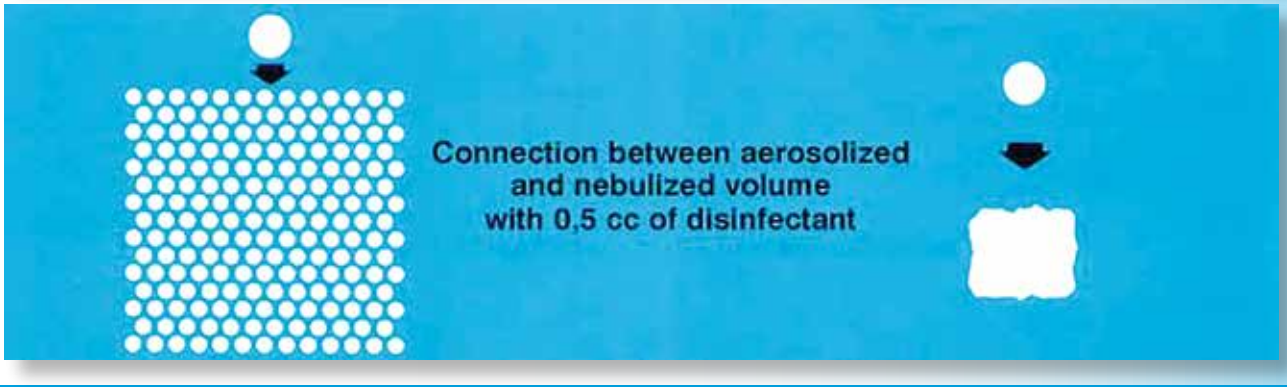
Another important characteristic of aerosolic micelles derives from the fact that the smaller their diameter is, the greater the surface they can cover. That is possible, and will immediately become clear, if we consider the following example: a liquid sphere having a diameter of 1 cm. has a surface area of about 3 sqcm and a volume of about 0.5 cc.; the same volume divided into 1 micron particles (1/1000 mm.) produces 1000 billion micelles that can cover, in close contact, a surface area of 3 sqm., that’s to say 10.000 times the initial surface.



STERI-AIR-80, is a dry aerosol generator which issues into the air, in the form of microbic micelles, specific substances such as disinfectants, balsams, antibiotics, parasiticides etc. Thanks to their very high speed and their strong electric charge intensity (at very slow exhaustion), these substances enter into contact with the environmental bacterial flora, reducing at a minimum level the bacteria concentration. By using this apparatus it is possible to purify the air and the exposed surfaces as well. One of the most innovative advantage of **STERI-AIR-80** is the possibility of activating a continuous disinfection process, even in the presence of human beings: **STERI-AIR-80** does not wet, does not stain, does not dirty. Fields of employment The application fields of **STERI-AIR-80** cannot be defined or limited beforehand. In fact it can be used effectively in operating theatres, intensive care wards, surgeries in general, dental surgeries etc. Now it is also employed in foodstuff industries like dairy-farming, ham-farming, in wine cellars etc., and everywhere the asepsis is the indispensable presupposition for a highly professional and quiet work.







BIOSPRAY DISINFECTION MACHINE

Portable ULV Fogging Machine with 1.5 litre tank.

The BioXSpray hospital disinfection machine removes nearly 100% of all viruses, yeasts, mould and harmful bacteria from places where there's a high likelihood of germs, viruses and parasitic elements.

It's an innovative solution and a future-proof answer to the ever-prevalent threat of superbugs – something that's absolutely critical in the healthcare industry.

The disinfectant sprayer breaks down water and oxygen in an environmentally friendly way to deal with the full spectrum of germs, bacteria, viruses and funguses inside public health areas. With uniform disinfection of each surface, including electronic ones, your hospitals, ambulances and patient rooms will be left refreshingly clean, with fresh oxygen-rich air that's free of all germs and other infectious particles.

The BioXspray disinfectant fogging machine can be effectively used in:

nurseries, aged care centres, hospitals and laboratories, ambulance, schools, poultry farms, cleaning industry, insect control, public transport, public health, veterinary clinics.

Features

- 6.3 kg weight
- 1100 watt 220 V AC 50-60 hz electric motor
- Adjustable rotation speed
- Assurance of homogeneous fogging distribution through 360° rotation drum
- Dry and wet mist projection by Venturi effect up to 15 meters from the appliance
- Speed of mist flow rate 80 m/s
- Particle size: 7 - 20 micron
- Interchangeable cartridge 05 - 1 lt
- 0.5-1-2 ml for 1 m3 according to adjustable particle size
- Programmable indoor volume between 0-1000 m3
- CE certified

Code	Description
FOG0006	Biospray Disinfection ULV Fogger

SM BURE ULV FOGGER MACHINE

Portable ULV Fogging Machine with 1.5 litre tank.

SM Bure ULV Fogger has a wide array of applications, making it one of the most versatile and powerful ULV Foggers on the market.

Disinfection/Sterilization: The SM Bure ULV Fogger enables injection of anolyte and catholyte solutions to every corner inside or outside of any auto, truck or transit vehicle. Its small micron droplet nozzle that is adjustable provides for ultimate coverage and protection against infectious pathogens.

Application/Spray: The SM Bure ULV Fogger can be utilized for the application of resistant and nutritional supplements. Also, it enables spraying of dynamic materials including water-based and oil-based materials while functioning as a humidifier and micro-organism sprayer.

SM Bure Fogger - Fast and Efficient
Strong injection and ultra-low volume spraying function ensures the penetration and diffusion to fine areas.

Features

- Switch(On/Off) function
- Control of solution amount
- Air vent valve installed at solution tank
- One-touch exchange of solution tank
- Powerful Blower allows drying and air cleaning as well as administering solution
- Adjustable 5-10 Micron droplet size
- CSA Approved 110V and 220V
- 3 litre solution reservoir
- Spray reach 5-10 meters

Code	Description
FOG0003	Biosmist Steri7 ULV Fogger

Technical Specifications

Product Name	Motor Output	Capacity of Chemical	Injection Distance	Particle Size	Colour	Power Source	Size	Weight	Wire Length
BURE	1,250W	3L (0.8 Gal)	5 ~ 10M (16.6~32 ft)	10 ~ 50	green grey blue red	100V 110V 220V 240V	160*550*250mm (6.3*21.7*9.8 In) (Net)	3.0kg (6.83 lb)	6M (19.7 ft)

VECTORFOG™ FOGGING MACHINES

Vectorfog™ ULV fogging equipment is used predominately for the application of disinfectants, biocides, fungicides and pesticides. Our ULV fogging machines generate a fog or mist formed of Ultra Low Volume (ULV) droplets between 5-50 microns (µm) in diameter. Studies have shown that droplets of this size are ideal to tackle pathogens, vector carriers and pests. In addition formulations can be applied in concentrations of 10-90% and at flow rates of up to 0.5 litres per minute (30 litres per hour) making them more efficient in the Volume Median Diameter (VMD) spectrum.

Portable ULV Fogging Machine with 1.5 litre tank.

The new C20 is one of the smallest yet powerful ULV foggers in the market. Features include a 1.5 litre tank, a 560 Watt Samsung motor, outflow of 15-30 LPH, adjustable droplet size between 5-50 microns and a two speed output control.

Thanks to its compact design, this fogger is ideal for spraying in smaller spaces including domestic properties as well as food preparation areas, car valets and offices. In addition, the power can be halved reducing noise levels, which is ideal for hospitals, nursing homes, and schools.

Features

- Tank Capacity 1.5 Litres
- Power 220V / 110V
- Flow Rate 15-30LPH
- Droplet Size 5 – 50 microns
- Net Weight 3 kg
- Dimensions 48 x 20 x 25 cm

Battery operated ULV Fogger battery operated.

Using the latest in battery technology, the DC20+ ULV fogger has been specially designed to produce up to 45 minutes of continuous fogging time with only 2.5 of charge time.

Features include a 2 litre tank, advanced 12V DC motor from LG electronics, two speed control and an adjustable nozzle producing droplet sizes between 5 to 50 microns. Thanks to it's compact design, this fogger is ideal for spraying in smaller spaces including domestic properties as well as food preparation areas, car valets and offices. In addition, the power can be halved reducing noise levels, which is ideal for hospitals, nursing homes, and schools.

Features

- Tank Capacity 2 Litres
- Power 12 V
- Spray Distance 2 - 7 m / 6.5 - 23 ft
- Droplet Size 5 – 50 microns
- Net Weight 3.2 kg
- Dimensions 48 x 25 x 20 cm

Code	Description
FOG0001	Vector C20 ULV Cold Fogger 1.5L
FOG0002	Vector DC20 ULV Cold Fogger 2L Cordless

New generation Ultra Low Volume Fogger

Powerful spray and Ultra-low particle permeates into even the minute area.

Features

- Spraying of various substances (pesticide, disinfectant, air freshener, cleaning products, antibiotic, etc.)
- Injection type for spraying ultra-low particles.
- Non-stop system, from tank to nozzle.
- Realiztion of spare care.
- Maximization of space efficiency.
- Maximization of easiness of use through ultra-small and ultra light design (categorization per tank size : 2.5L/4.5L)
- Reduction of expenses and drug costs due to minimization of electrical power consumption and storage efficiency.
- Air drying and air cleaning.

Use in

- In houses (Air freshener)
- Public office, educational facilities and medical facilities
- Commercial buildings

Code	Description
FOG0004	AN-GAE 2.5 Steri 7 ULV Cold Fogger
FOG0005	AN-GAE 4.5 Steri 7 ULV Cold Fogger

Technical Specifications

Model	Power/ Motor Output	Spray distance	Particle Size	Tank Capacity	Size (W*D*H)	Weight	Power cord length
AN·GAE FOG 2.5	110V~125V (700W) 220V~240V (700W)	5~10MT (16.6~32ft)	5~20	2.5LT (0.7Gal)	140*425*240 (0.45*1.4*0.78ft)	2.0KG (4.4Lb)	6MT (19.68ft)
AN·GAE FOG 4.5				4.5LT (1.2Gal)	151*425*296 (0.5*1.4*1ft)	2.2KG (4.8Lb)	10MT (32.8ft)
BURE FOG 4.5				4.5LT (1.2Gal)	151*425*296 (0.5*1.4*1ft)	2.2KG (4.8Lb)	6MT (19.67ft)

HSP H05 ULV FOGGER

Portable ULV fogging machine with 5 Litre Tank

The H05 is one of the best aerosol ULV foggers currently available, with its water and oil-powered 50Hz engine kicking out 1400w at 220V AC power.

Whether you're a property owner or a commercial premises manager/owner, the ULV Fogger H05 allows you to disinfect with ease and a high degree of efficiency.

The storage tank can easily hold up to 5 litres of disinfectant, while the 0-49 l/h flow rate output is one of the best in the ULV fogger industry. Boasting an impressive fogging and disinfection speed of 10-15 km/h, the H05 is a very practical and economical solution. It weighs a mere 5.3 kg with an adjustable solution droplet size of 9-49 microns.

The low weight and compact size makes it highly suitable for private and commercial use, although it is highly recommended that you carefully study and understand the safety and operational instructions beforehand.

Where can I use it?

Use your H05 ULV cold fogger in greenhouses, hospitals, schools, homes, restaurants, holiday sites, food places, dairy farms, poultry yards, depots, barns, etc.

Features

- Motor 1400 w, 220 V AC, 50 Hz
- Solution tank capacity 5 litres
- Solution output flow rate 0-49 l/h
- Solution droplet size 9-49 micron
- Empty weight 5.3 kg
- Dimensions 50 x 17 x 50

Code	Description
FOG0007	HSP H05 ULV Fogger 5L

HSP DISINFECTION BOOTH

HSP have produced a fully automated disinfection booth (used in conjunction with Steri 7 Halo RTU disinfectant) to allow local disinfection prior to entering any premises.

This is fully collapsible so can be easily transported from site to site. The construction is made from 6mm aluminium composite panels that easily fit together and can be assembled in minutes. Once system is assembled and primed any person will simply enter the booth and stop in front of the DAC (Disinfectant Application Console) and the PIR will automatically start the disinfection process. The 8 misting nozzles will begin to release the disinfectant for a period of 10 seconds. The person will need to rotate 360° to ensure disinfection of full body. Once the process has ended the person can simply exit through the other side of the booth. The DAC can be refilled with disinfectant from the rear of the DAC panel – there is space to hold 2 x 5 litre bottles at a time.

Code	Description
MODIS001	HSP Disinfection Booth

INFARED THERMOMETER

Infrared Non Contact Thermometer

Designed to take safe, fast and accurate readings of body temperature in to order to ascertain if persons are showing symptoms of illness.

- Fast 1 second readout
- Proven precise and accurate readings
- 500000 Measurements
- Non-contact measurement to avoid crossinfection
- No laser spot eliminating eye's damage to children
- Convenient backlit screen with tricolor-coded fever guidance
- Measures Body/Object/Liquid temperature

Measuring Distance:	1-3cm
Measuring Range:	32°C~43°C (90°F~108°F)
Accuracy:	≤±0.3°C
Operating Temperature:	16°C~35°C
Storage Temperature:	-20°C~55°C
Relative Humidity:	≤85%
Rapid measurement:	≤ 1 second
Automatic Shutdown:	20 seconds without any operation
Battery:	LR03(AAA) X2 (not included)
Safety Classification:	Type BF
Certificates:	CE. ROHS
Warranty Period:	1 Year
Dimension Size (mm):	138 x 95 x 40

Code	Description
THERM0001	Infrared Non Contact Thermometer

- Control the risk of infection
- Lightweight & easy to assemble
- Easy Clean Wall Construction
- PIR activated – no need to touch
- Easy change disinfectant process
- Safe for humans (as long as used in conjunction with Steri 7 Halo solution)
- Quick and easy to use

Cubicle Dimensions:
1200mm w x 1000mm d x 2070mm h
External Dimensions:
1200mm w x 2050mm d x 2070mm h
Weight:
120kg
Power:
1 x 230v 13a single phase or 1 x 110v 16a single phase

DISINFECTION MACHINES

Disinfection Humidifier

- Can be used in offices, care homes, schools and public places. In built timer allows disinfection to autorun at different times night or day.
- This unit should be filled with Steri 7 Halo RTU product. Normal disinfectants, alcohol or other chemicals cannot be used with this machine.

Technical Specifications	
Voltage	220v/50 hz
Power	110w
Coverage	150-200 sqm
Tank Capacity	23.8 Litre
Usage	2 Litre per Hour
Weight	7kg
Dimensions	317mm x 315mm x 740mm

Code	Description
FOG0020	Disinfection Humidifier

Disinfection Dispenser

- Can be used in offices, care homes, schools and public places.
- Safe to use without the need for PPE.
- Simply open exhaust and depress foot pedal to dispense disinfectant from 4 spray nozzles. Process should last 6-8 seconds.
- This unit should be filled with Steri 7 Halo RTU product. Normal disinfectants, alcohol or other chemicals cannot be used with this machine.

Technical Specifications	
Voltage	220v
Power	150w
Flow Control	15-20ml
Tank Capacity	15 Litre
Particle Size	10-30 µm
Spray Distance	40-80cm
Nozzle Size	0.15-0.3mm
Dimensions	520mm x 300mm x 1270mm
Weight	26KG
Disinfectant Release	Foot pedal 6-8 Seconds
Other Control	Tank Level Low Cutout

Code	Description
FOG0021	Disinfection Dispenser

Individual Back to Work Kit

The kit contains basic protection elements to minimise risk of infection.

- 1 x Steri-7 Clinical Wipes pk40
- 2 x Pair Powder Free Disposable Gloves
- 5 x 3 Ply Ear Loop Civil Masks
- 1 x 100ml Medical Grade Hand Gel

Code	Description
Kit0001	Individual Back to Work Kit

Multi Person Back to Work Kit

The kit contains basic protection elements to minimise risk of infection for multiple persons.

- 6 x Steri-7 Clinical Wipes pk40
- 2 x Pk 100 Powder Free Disposable Gloves
- 40 x 3 Ply Ear Loop Civil Masks
- 20 x 100ml Medical Grade Hand Gel
- 1 x Infared Non Contact Thermometer

Code	Description
Kit0020	Multi Person Back to Work Kit

*** Please note that due to increased demand some items are not always readily available so a substitute item may be used. Please check stock availability before placement of order to avoid disappointment.**

HSP

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