



Complete Care for Long Term Care

One of the most trusted Infection
Prevention brands in healthcare

gama
healthcare

"GAMA is at the forefront of infection prevention and control technology. Our products are trusted to be effective, safe and easy to use."

Our story begins in 2004



Guy Braverman - CEO

Our founders noticed a seemingly small problem while working in a hospital: their stethoscopes would touch each of their patients but there wasn't a way to effectively clean them on busy wards. That simple observation put doctors Guy Braverman and Allen Hanouka on a mission to create an all-in-one cleaning and disinfection wipe which could solve that problem.

GAMA Healthcare has become a world-leading infection prevention specialist, with a diverse portfolio of products ranging from specialised patient isolation products, personal hygiene ranges and many patented formulations for a variety of surface disinfection products.

We have a direct presence in the UK, Australia and China, alongside a network of manufacturers and distributors worldwide.



Allen Hanouka - CEO

We specialise in the manufacture and distribution of scientifically proven infection prevention products for healthcare. Our products are backed by clinical evidence and rigorous scientific testing. What sets us apart from other infection prevention and control companies is the innovation we bring to infection prevention technology and the training and support we offer to our partners.

The products and services we provide are designed to easily integrate into our partner organisations. We are committed to delivering world-class training to our partners, with information tailored specifically for each organisation.

This brochure will identify products and services to help you provide the care and support required to keep you, your colleagues and your residents safe.

Environmental cleaning

The importance of infection prevention in healthcare	4
Considerations for effective cleaning and disinfection	5
How to clean effectively	7
The benefits of Clinell Wipes	8

Surface disinfection

Clinell Universal Range	10
Clinell Peracetic Acid Range	11

Skin care

Hand Hygiene	12
Touch-free Hand Disinfection	12
Contiplan	13
Carell Bedbath Range	13

Support products

Easyclean Commode	14
EvaluClean Auditing UV Torch	15
Clean Indicator Range	15

Ordering information

Surface	16
Hand hygiene	17
Skin disinfection	17
Waterless bathing	18
Commode	19
Training aids	19

The importance of infection prevention in healthcare

Infection control is important not only for the health, safety and wellbeing of residents, but also for those who work in aged care. Harmful microorganisms may be shed into the environment, which can be transferred to others, including residents, visitors and staff.

Why should we clean?

In Europe alone, over 4 million people each year acquire a healthcare-associated infection (HCAI) – with 37,000 dying as a direct result. This problem does not just affect patients and workers in hospitals – HCAs can occur in any healthcare setting, including office-based practices (e.g. general practice clinics, dental clinics, community health facilities) and long-term care facilities.

A number of investigations have highlighted the importance of environmental contamination in the transmission of clinically relevant pathogens such as *C. difficile*, VRE and MRSA. As such, surface disinfection is now a cornerstone of infection control policies.

The most common source of microorganisms in a healthcare setting is the patients or residents themselves: infected and colonised patients (and healthcare staff) shed bacteria, viruses and spores into the environment. In the healthcare environment, areas near the patient and high-touch surfaces have been found to harbour microorganisms, increasing the risk of infection.

Adequate cleaning and/or disinfection of these surfaces (bedrails, commodes, door handles, light switches, patient call buttons, surfaces and equipment in close proximity to the patient) is particularly important to break the chain of infection.

Hand hygiene before and after touching these surfaces is often inadequate.

Many organisms responsible for HCAs, including MRSA, *C. difficile* and Norovirus, survive and persist on environmental surfaces at concentrations sufficient for transmission and transference to the hands of healthcare workers.

There now exists an increasing body of knowledge which highlights that improved infection control practices can help break the chain of transmission.

Studies have shown that when cleaning is sub-optimal, it can place patients, residents, staff and visitors at risk. Use of appropriate cleaning and disinfection programmes will reduce the microbial burden in the environment and help you deliver safe, effective care.



Improved cleaning and disinfection of surfaces decreases the risk of infections

Considerations for effective cleaning and disinfection

Over dilution creates an ineffective, weak solution. Under dilution creates an excessively strong solution that may damage equipment. Dirt within the solution and on the surface makes chlorine ineffective.

Dilution errors

Dilution errors can easily occur when preparing disinfectant solutions. An error in using too much water when mixing up a solution can result in a disinfectant that is too weak and therefore ineffective. Conversely, using too little water results in a solution that is too strong, therefore toxic and harmful to materials and to the user.

Chlorine breaks down over time and since it is common practice to leave the mixed solution for many hours when using it, there may be an issue as efficacy reduces over time.

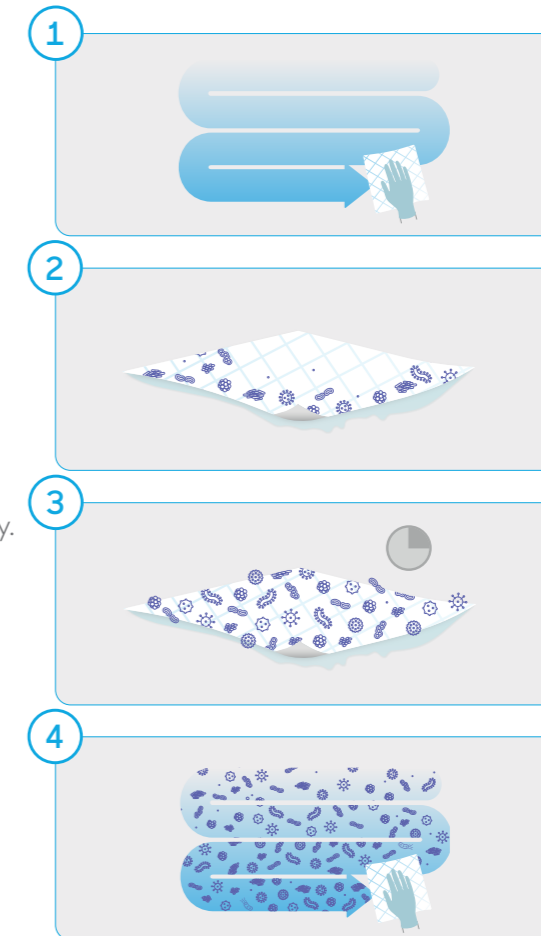
Chlorine is inactivated by biological contamination or in 'dirty conditions'. Therefore, a dirty surface will need to be pre-cleaned. Clinell disinfectant wipes contain detergent and biocides which clean and disinfect in one step.

At GAMA Healthcare we always test the liquid released from the wipes, rather than disinfectant added to the wipes, so that there is 100% certainty that the solution on the surface works effectively.

Issues with reusable cloths

Damp cloths breed microorganisms. These are then transferred onto new surfaces when cloths are re-used.

When using the same cloth throughout the day it usually remains damp in between uses & the cloth often does not dry fully. This leaves small areas of dampness within the cloth which can harbour bacteria. These microorganisms can then be spread around surfaces when the cloth is re-used.



Microorganisms are cleaned off from a surface.

Microorganisms are retained in the cloth.

Microorganisms grow in damp conditions.

Microorganisms are spread by the cloth.

93% of all reusable cloths, tested after laundry, were found to still have viable microbes

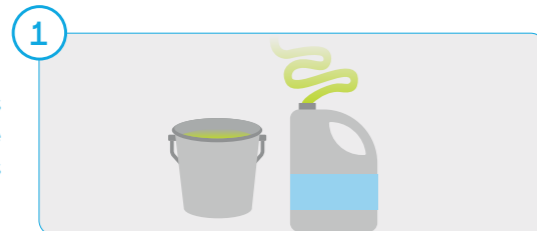
Considerations for effective cleaning and disinfection

GAMA Healthcare collaborates with manufacturers of healthcare equipment to test compatibility, produce decontamination procedures and inform polymer choice for new products.

Inhalation of chlorine on a regular basis can increase the risk of lung fibrosis

Health issues

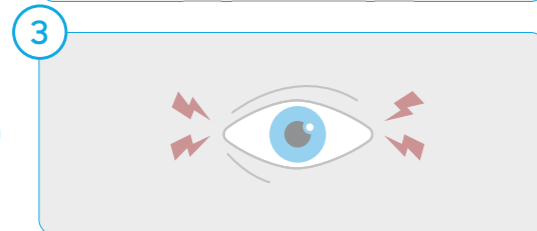
Toxic fumes from chlorine can affect the lungs, eyes, nose and throat. All disinfecting procedures must include a risk assessment of potential toxicological hazards. Chlorine may be hazardous to the user, patients and residents, emitting toxic fumes and by-products. Chlorine inhalation has been shown to cause obstructive lung disease, eye irritation, nasal complaints, cough and skin complaints.



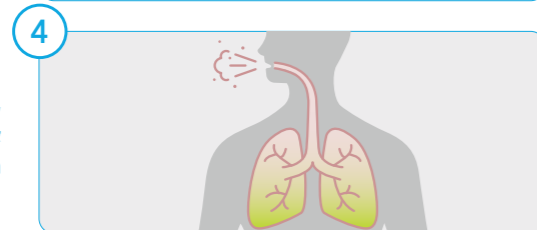
Toxic fumes from chlorine based products



Lung damage



Eye irritation



Nose & throat damage, causing coughs & shortness of breath

Material compatibility

Changes in Infection Prevention practice have led to more frequent cleaning of items that were not designed for exposure to disinfectants in the same way as products designed solely for healthcare use.

As a company that places great importance on scientific processes, we work with leading healthcare equipment manufacturers to provide compatibility data.

GAMA collaborates with manufacturers of healthcare equipment to test compatibility, produce decontamination procedures and inform polymer choice for new products. Our products have been approved by many leading manufacturers for equipment and surface disinfection, and have been tested by a number of third party laboratories to ensure highest levels of material compatibility.

A list of equipment for which GAMA products are approved for use can be found on our website:

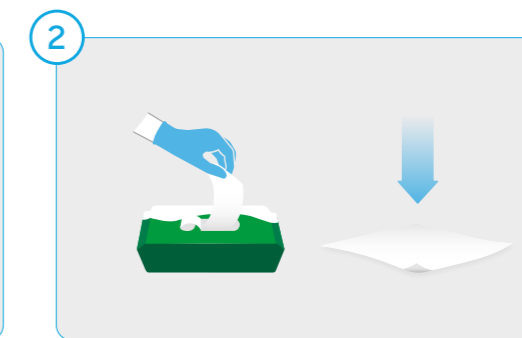
gamahealthcare.com/compatibility >

How to clean surfaces effectively

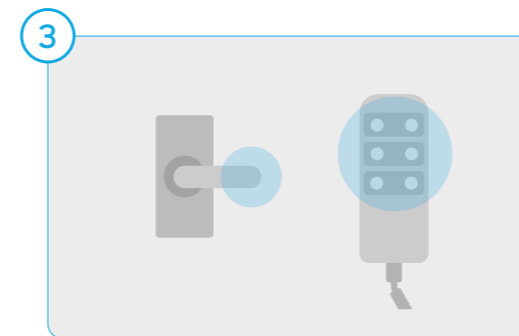
Good cleaning practices reduce microorganisms in the environment, which can lead to a reduction in incidence of HCAs, helping protect residents and staff whilst reducing costs.



Perform hand hygiene. Perform a risk assessment and choose the appropriate Personal Protective Equipment (PPE) according to facility policy.



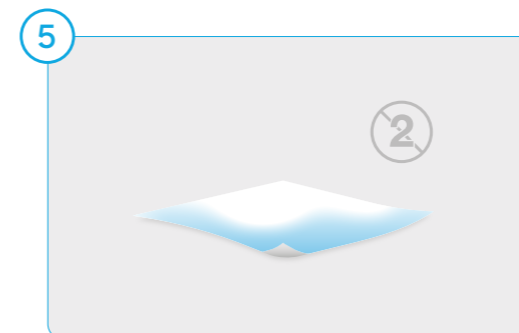
Take one disinfectant wipe and open flat.



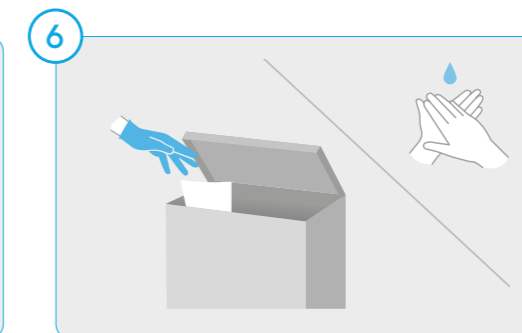
Wipe all surfaces including the underneath, paying special attention to 'high touch' points such as handles, control buttons etc.



Wipe from top to bottom, going from a clean to dirty area using an 'S' shaped motion. (Overlap slightly and return outside the surface to avoid missing any areas).



Dispose of wipe between each separate surface, or if it becomes dry or soiled.



Remove any PPE then perform hand hygiene.

The most effective way to keep a surface clean is to follow these steps

The benefits of Clinell Wipes

It can be difficult and time consuming to evaluate which of the many formulas and systems are effective and which will work best for your facility.

Wipes are increasingly used to clean and disinfect surfaces and equipment in healthcare

Effective formula

It is important that the IPC company adequately shows how the formula works by explaining what the active compounds are and outlining their relationship with common bacteria. How the formula reacts with different wipe fibre compositions is of equal importance, especially when discussing solutions and sprays. Depending on the fabric of the wipe, some disinfectants ingredients can become trapped, rendering them inactive and less effective.

Scientifically validated

It is important that the manufacturer has an experienced and reputable microbiologist available to not only explain the importance of all aspects of the formula, but also the relevant testing from culture preparation to neutralisation, or experiment end point, validation.

Published user studies

Reputable IPC companies should be able to undertake and publish practical user results for their products.

Training

Comprehensive training on the correct use and best practice for products should be made available.

Realistic contact times

All data should be readily available and relevant. The data should reflect achievable contact times and conditions, not just headline method and results. Tests undertaken in 'clean' conditions may be less likely to reflect the conditions the product is intended for. While 'dirty' conditions may mimic realistic conditions, such as commodes, better.

Complies with regulations

All products should comply to current product safety regulations and occupational health considerations and guidelines.

Relevant testing

It is vital that the claims made and results advertised come from tests on the liquid expressed from the wipe and not on solutions to be applied to wipes.

"GAMA Healthcare is confident that it conforms to all these requirements and will continue to maintain full transparency on all testing and formula characteristics in the future."

Every year thousands of people contract infections from dirty surfaces. By keeping these surfaces clean, we can ultimately keep people safe from infections.

For everyday surface disinfection

Universal Range

Dirty surfaces harbour many microorganisms that can cause infection. To protect yourself, your staff and those you care for, you need to efficiently clean and disinfect your surfaces. Clinell Universal offers a complete range of products that combine cleaning and disinfection into one easy step.

Clinell Universal uses both detergents and biocides in its unique formulation. The detergents break down and clean away organic matter such as dirt or bodily fluids, while the biocides kill 99.99% of bacteria and viruses in as little as 10 seconds.

The simple one step process makes decontamination easier for you and makes developing resistance more difficult for microorganisms.

It also means you no longer have to use multiple products, saving you time and money.

Clinell Universal's ability to effectively decontaminate a wide range of surfaces is what makes it a trusted product in the UK, used by 9 out of 10 NHS hospitals.

Following the initial COVID-19 outbreak in early 2020, we immediately tested Clinell Universal against the exact strain of the virus that was rapidly infecting the globe, SARS-CoV-2. We wanted to make sure that Clinell Universal could properly kill the virus and protect us against it.

Tested in an independent laboratory, we proved that Clinell Universal kills the virus that causes COVID-19 in as little as 30 seconds.

Kills 99.99% of bacteria and viruses ✓

Patented formulation ✓

Cleans and disinfects in a single step ✓

N°1 disinfectant wipe in the UK National Health Service ✓



Some surfaces can harbour hard-to-kill microorganisms and biofilms, complex structures sheltering many bacteria colonies. They can be particularly hard to wipe out and require enhanced disinfection.

Peracetic Acid Range

Peracetic acid is a powerful disinfectant capable of eradicating hard-to-kill microorganisms. As a strong oxidative agent, peracetic acid is a great candidate for enhanced disinfection and tackling biofilms.

Biofilms occur when free-floating microorganisms attach to a surface and form communities. In these communities, bacteria are protected by a slime-like substance, which allows them to survive in hostile environments and protects them from decontamination.

Peracetic acid effectively breaks down biofilms and kills the bacteria

sheltering inside. The biggest challenge is that peracetic acid can be highly acidic and damaging to surfaces. Our Clinell Peracetic Acid range uses patented technology to overcome these limitations.

Our Peracetic Acid range contains active ingredients, which when exposed to water, produce peracetic acid and a blend of other disinfectants. Meaning that they are great for killing biofilms and won't damage surfaces.

Clinell Peracetic Acid Wipes and Drain Disinfectant offer enhanced disinfection for the management of biofilms living on dry and wet surfaces.

For biofilms & hard-to-kill microbes

The most powerful wipe in the world. More effective than chlorine. Using patented technology to clean, disinfect and eradicate up to 99.9999% of hard-to-kill microorganisms as well as biofilms living on dry surfaces.

Proven protocol for the treatment of wet biofilms living in sink and shower drains. Peracetic acid generating granules, activated by water, wipe out 99.9999% of microorganisms and prevent regrowth for at least 4 days.



Hand hygiene is essential when it comes to reducing the risk of infection. Without good hand hygiene practices, we risk transmitting microorganisms to other surfaces, infecting ourselves and others.

For everyday hand hygiene

Hand Hygiene Range

Our hands pick up lots of microorganisms from surfaces. Without proper hand hygiene, our dirty hands can transfer germs onto other surfaces and people. Our Clinell Antimicrobial products keep hands clean and fresh, without the need for soap and water. Killing up to 99.99% of germs, they lower the risk of transmission.

Our Antimicrobial Hand Wipes can be placed at the point of use to

encourage proper hand hygiene, while our range of Antimicrobial Gels are great for personal use.



Touch-free Hand Disinfection

Regular hand disinfection can help prevent the transmission of germs to other surfaces and other people. People are becoming more conscious of the germs around them and how they can take responsibility for their hand hygiene; by ensuring that we can all regularly disinfect our hands, we can help prevent the spread of germs.

The Clinell Touch-free Hand Disinfection dispenser is a sleek, portable device, that can be placed in a variety of high traffic locations any time you need it.

Our world class formulation kills all known viruses and contains a blend of moisturisers and natural fragrance, leaving hands feeling well hydrated and fresh.



Other flagship products

Skin is the largest organ in the human body and plays an important role in protecting us against infection, so it is vital that we look after it effectively.

CONTIPLAN⁺ Cleansing Cloths

Incontinence is more common than you'd think. Millions of people suffer from incontinence regardless of age or gender. Each person affected is at risk of developing Incontinence Associated Dermatitis (IAD), a form of Moisture-Associated Skin Damage (MASD) that can be caused by long exposure to urine and liquid stool.



The affected skin should be gently cleaned and protected. Contiplan is a 7-in-1 cleansing product that effectively cleans and protects skin from MASD. Contiplan combines 7 advantages into one simple to use wipe.

- Soothing
- Moisturising
- Skin friendly
- Natural plant extracts
- Barrier protection
- Cleansing
- Long lasting protection

For protecting skin's defences

carell® Bedbath Range

For people confined to a bed, they're traditionally washed using a basin and washcloth. However, this can do more harm than good. Typically the microorganisms removed by the washcloth are put into the same water used to clean, increasing the risk of infection.

The Carell Bedbath Range offers an all-in-one solution that cleans, moisturises and leaves skin feeling fresh; all while reducing the risk of infection.

All the products in this range have been dermatologically tested and are alcohol, lanolin and paraben-free.



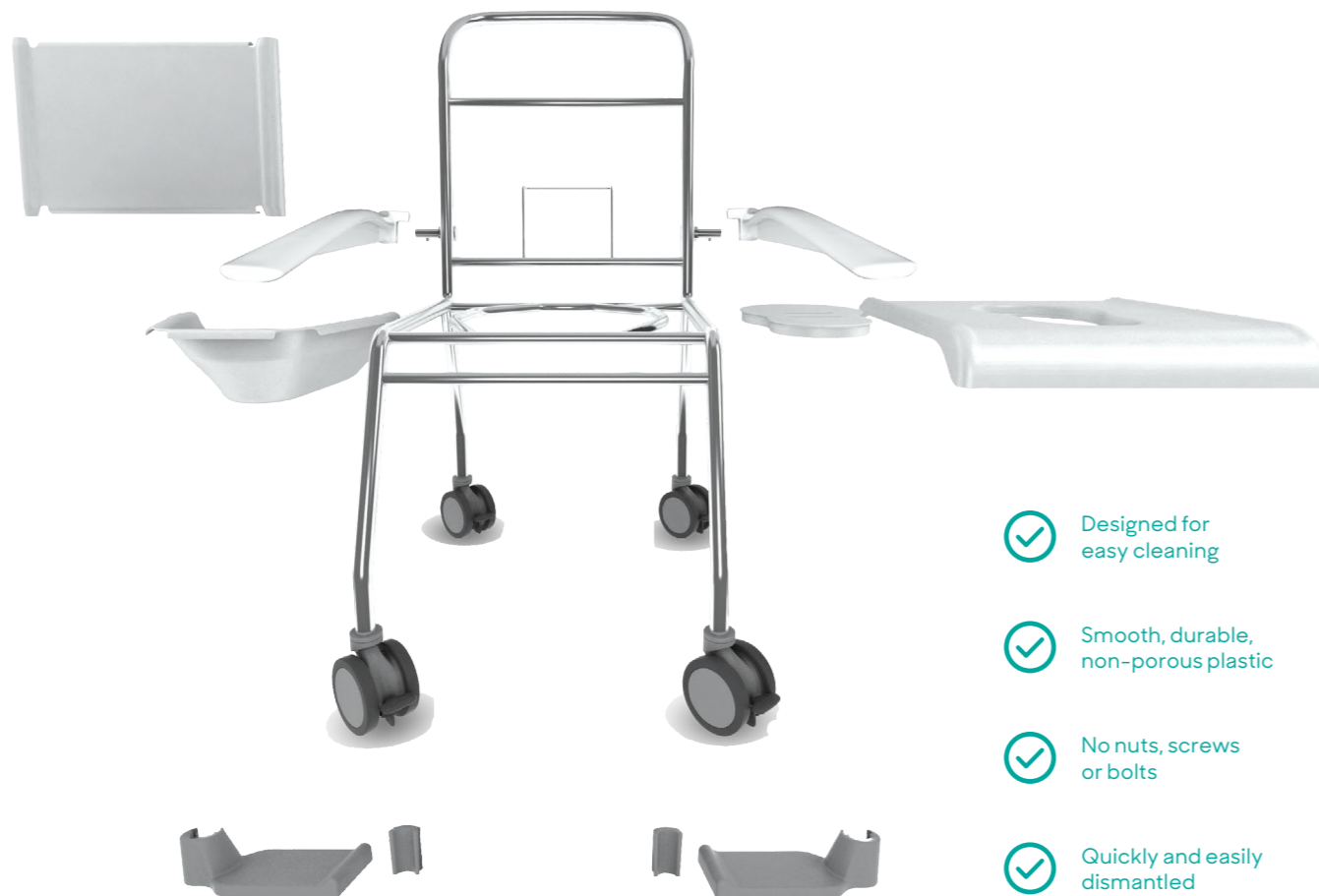
Other flagship products

clinell[®] easyclean[™] commode

For safe commode disinfection

For those with limited activity, commodes can be used as a portable toilet. Many people find using a commode is less stressful than using a bedpan alone. However, they can easily become contaminated with microorganisms that can spread to the next user if not correctly cleaned and disinfected.

The Clinell Easyclean Commode can be fully dismantled, making it simple and easy to clean. All the surfaces are smooth and free from screws, bolts and nuts, which means there are less places for dirt and germs to accumulate.



- ✓ Designed for easy cleaning
- ✓ Smooth, durable, non-porous plastic
- ✓ No nuts, screws or bolts
- ✓ Quickly and easily dismantled

In-house training aids

Training and information are important aspects of infection prevention for us at GAMA Healthcare. We encourage the development of infection prevention methods that are workable and personal for every one of our partners and customers.

We also offer training aids that help our partners and customers audit performance to keep their surroundings safe and protected.

clinell[®] evaluclean

We also provide a powerful auditing tool, Evaluclean. Evaluclean is designed to evaluate the environmental cleanliness of surfaces and equipment. It features a fluorescent marker alongside a UV torch that can be used to monitor how thoroughly surfaces or equipment have been cleaned and disinfected. The gel is only visible under UV light and can easily be wiped away

during cleaning. By marking surfaces before cleaning takes place, you can use the UV light to see how well surfaces are being cleaned.



For training and auditing

clinell[®] Clean Indicator Range

Indicators can be used to clearly show what is and isn't clean. Clinell Clean Indicators are available as tape or red/green notes. Both have a no-residue adhesive, which means they can be placed where needed to indicate whether the area has been cleaned, or needs to be cleaned.



clinell® Universal Range

Multipurpose wipes and spray for surface disinfection and cleaning of non-invasive medical devices.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Universal Wipes Adhesive Back 50 *	Pack of 50	CWAB50
Universal Wipes Clip Pack 50 *	Pack of 50	CWCP50
Universal Wipes Tub 100 *	Tub of 100	CWTUB100
Universal Wipes Tub Refill 100 *	Refill of 100	CWTUB100R
Universal Wipes 200 *	Pack of 200	CW200
Universal Wipes Bucket 225 *	Bucket of 225	CWBUC225
Universal Wipes Bucket Refill 225 *	Refill of 225	CWBUC225R
Universal Spray 60ml	60ml Bottle	CDS60
Universal Spray 500ml *	500ml Bottle	CDS500
Wall Mounted Dispenser	(for CW200)	CWD

For cleaning and disinfecting surfaces

*Bicidal products intended for cleaning and disinfecting surfaces and equipment.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Universal Wipes 40 †	Pack of 40	CW40
Universal Wipes 84 †	Pack of 84	BCW84
Universal Wipes 100 †	Pack of 100	BCW100
Universal Wipes 120 †	Pack of 120	BCW120
Universal Wipes 200 †	Pack of 200	BCW200
Wall Mounted Dispenser	(for BCW200)	CWD

CE 0050 Class IIa Medical Device

clinell® Biodegradable Wipes Range

For cleaning and disinfecting surfaces.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Biodegradable Surface Wipes	Pack of 60	BCW60PF

clinell® Peracetic Acid Range

Peracetic Acid Wipes and Drain Disinfectant for enhanced disinfection against hard-to-kill organisms.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Peracetic Acid Wipes *	Pack of 25	CS25
Drain Disinfectant	Pack of 24	CSDD24
Wall Mounted Dispenser	(for CS25)	CS25D



clinell® Spill Wipes

A super absorbent, peracetic acid generating pad and disinfectant wipes. Designed for body fluid spills.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Spill Wipes	Single unit	CSW1
Wall Mounted Dispenser	(for CSW1)	CSWD



clinell® Touch-free Hand Disinfection

Touch-free dispensers and refills for disinfecting hands safely and effectively.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Free-Standing Gel Dispenser Kit (stand, backplate, drip tray, batteries & IFU)	1 x Kit	CHDNKBGS
Wall-Mounted Gel Dispenser Kit (backboard, drip tray, batteries & IFU)	1 x Kit	CHDNKBMM
Fragranced Dispenser Refill Cartridge	1000ml cartridge	CHDN1000GR



clinell® Alcohol Gel Hand Sanitisers

Sanitising hand gels for disinfecting hands when soap and water are not available.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Hand Sanitising Alcohol Gel 50 (Retractable Clip)	50ml bottle	CHSGTOT50
Hand Sanitising Alcohol Gel 50	50ml bottle	CHSG50
Hand Sanitising Alcohol Gel 100	100ml bottle	CHSG100
Hand Sanitising Alcohol Gel 250	250ml bottle	CHSG250
Hand Sanitising Alcohol Gel 500	500ml bottle	CHSG500



clinell® Antimicrobial Hand Wipe Range

For cleaning and disinfecting hands. Kills 99.99% of bacteria and enveloped viruses without the need for soap and water.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Antimicrobial Hand Wipes 100	Box of 100	CAHW100
Antimicrobial Hand Wipes 200	Pack of 200	CAHW200
Wall Mounted Dispenser	(for CAHW100)	CAHWD



clinell® 2% Chlorhexidine In 70% Alcohol

Individually wrapped wipes with a powerful, fast acting antimicrobial formula.

PRODUCT	UNIT OF ISSUE	ORDER CODE
2% Chlorhexidine in 70% Alcohol Skin Wipes	Box of 200 wipes	CA2CSKIN



clinell® Alcohol Wipes

Pre-injection swabs. Ultra-quick drying, smear free disinfection wipes for fast and effective cleans.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Alcohol Wipes Sachets 100 ††	Box of 100	CASS100

†† CE 1639 SGS Belgium Class IIa Medical Device



CONIPLAN⁺ Cleansing Cloths

A complete all-in-one continence care solution to cleanse, moisturise and protect, in one easy wipe.

PRODUCT	UNIT OF ISSUE	ORDER CODE
All in One Cleansing Cloths 8	Pack of 8	CON8
All in One Cleansing Cloths 25	Pack of 25	CON25



carell® Bedbath Range

Large, soft, rinse-free, cleansing and moisturising wipes for a complete full body bathing solution.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Shampoo Cap	Single unit	PRSHMC1
Bedbath Wipes 8	Pack of 8	CBB8
Bedbath Gloves 8	Pack of 8	CBBGL8
Body Care Wipes 60	Pack of 60	CBC60



carell® Personal Care Wipe Range

Dermatologically tested wipes with moisturisers for frequent use. Ideal to keep patients clean and fresh.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Refreshing Wipes 10	Pack of 10	CRW10
Personal Care Wipes 24	Pack of 24	CHF24
Personal Care Wipes Clip Pack 40	Pack of 40	CPP40



clinell® easyclean™ Commode

Unique, award winning commode. It can be fully dismantled and no bolts or screws make it simple, hygienic and easy to clean.

PRODUCT	UNIT OF ISSUE	ORDER CODE
EasyClean Commode	Single unit	CCOM1



clinell® evaluclean

Evaluclean is designed to evaluate the environmental cleanliness of surfaces, equipment & healthcare environments.

PRODUCT	UNIT OF ISSUE	ORDER CODE
UV Torch Kit	Single unit	CUV1



clinell® Indicator Products

Tape and Notes to fill out & attach prior to, or after disinfection, to show that equipment has been or needs to be sanitised.

PRODUCT	UNIT OF ISSUE	ORDER CODE
Indicator Notes Red	4 x 250 notes	CCIN1000R
Indicator Notes Green	4 x 250 notes	CCIN1000G
Indicator Tape	Single unit (100m roll)	CCIT100
Indicator Tape Wall Mounted Dispenser	(for CCIT100)	CCIT100D



References

- Royal Commission into Aged Care Quality and Safety Final Report: Care, Dignity and Respect – Volume 1 Summary & recommendations 2021.
- Dancer SJ. Controlling hospital-acquired infection: focus on the role of the environment and new technologies for decontamination. *Clin Microbiol Rev.* 2014;27(4):665–90.
- Healthcare associated infections (HAI): point prevalence survey, England. *Public Health England.* Published May 1, 2012. Accessed Feb 3, 2022. www.gov.uk/government/publications/healthcare-associated-infections-hcai-point-prevalence-survey-england
- Rutala WA, Weber DJ. Role of the hospital environment in disease transmission, with a focus on *Clostridium difficile*. *Healthcare Infection.* 2013;18(1):14.
- Wilson AP, Hayman S, Folan P, Ostro PT, Birkett A, Batson S, et al. Computer keyboards and the spread of MRSA. *J Hosp Infect.* 2006;62(3):390–2.
- Weber DJ, Anderson DJ, Sexton DJ, Rutala WA. Role of the environment in the transmission of *Clostridium difficile* in health care facilities. *Am J Infect Control.* 2013;41(5 Suppl):S105–10.
- Weber DJ, Rutala WA, Miller MB, Huslage K, Sickbert-Bennett E. Role of hospital surfaces in the transmission of emerging healthcare-associated pathogens: norovirus, *Clostridium difficile*, and *Acinetobacter* species. *Am J Infect Control.* 2010;38(5 Suppl 1):S25–33.
- De Geyter D, Blommaert L, Verbräeken N, Sevenois M, Huyghens L, Martini H, et al. The sink as a potential source of transmission of carbapenemase-producing Enterobacteriaceae in the intensive care unit. *Antimicrob Resist Infect Control.* 2017;6:24.
- WA. The role of the surface environment in healthcare-associated infections. *Curr Opin Infect Dis.* 2013;26(4):338–44.
- Sanderson PJ, Weissler S. Recovery of coliforms from the hands of nurses and patients: activities leading to contamination. *J Hosp Infect.* 1992;21(2):85–93.
- Dancer SJ. Importance of the environment in methicillin-resistant *Staphylococcus aureus* acquisition: the case for hospital cleaning. *Lancet Infect Dis.* 2008;8:101–13.
- Barker J, Vipond IB, Bloomfield SF. Effects of cleaning and disinfection in reducing the spread of Norovirus contamination via environmental surfaces. *J Hosp Infect.* 2004;58(1):42–9.
- Roberts K, Smith CF, Snelling AM, Kerr KG, Banfield KR, Sleight PA, et al. Aerial dissemination of *Clostridium difficile* spores. *BMC Infectious Diseases.* 2008;8:7.
- Smith SJ, Young V, Robertson C, Dancer SJ. Where do hands go? An audit of sequential hand-touch events on a hospital ward. *The Journal of hospital infection.* 2012;80(3):206–11.
- Kramer A, Schwebke I, Kampf G. How long do nosocomial pathogens persist on inanimate surfaces? A systematic review. *BMC Infect Dis.* 2006;6:130.
- Otter JA, Yezli S, Salkeld JA, French GL. Evidence that contaminated surfaces contribute to the transmission of hospital pathogens and an overview of strategies to address contaminated surfaces in hospital settings. *Am J Infect Control.* 2013;41(5 Suppl):S6–11.
- Mortier S, Bennet G, Fish J, Richards J, Allen DJ, Nawaz S, et al. Norovirus in the hospital setting: virus introduction and spread within the hospital environment. *Journal of Hospital Infection.* 2010.
- Dancer SJ, White LF, Lamb J, Girvan EK, Robertson C. Measuring the effect of enhanced cleaning in a UK hospital: a prospective cross-over study. *BMC Med.* 2009;7:28.
- Sifuentes LY, Gerba CP, Weart I, Engelbrecht K, Koenig DW. Microbial contamination of hospital reusable cleaning towels. *Am J Infect Control.* 2013;41(10):912–5.
- Humphreys PN, Finan P, Rout S, Hewitt J, Thistlethwaite P, Barnes S, et al. A systematic evaluation of a peracetic-acid-based high performance disinfectant. *Journal of Infection Prevention.* 2013;14(4):126–31.
- Hoyle GW, Svendsen ER. Persistent effects of chlorine inhalation on respiratory health. *Ann NY Acad Sci.* 2016;1378(1):33–40.
- Bloomfield SF. Significance of biocide usage and antimicrobial resistance in domiciliary environmental. *Journal of Applied Microbiology.* 2002;92(s1).
- Donlan RM, Costerton JW. Biofilms: Survival Mechanisms of Clinically Relevant Microorganisms. *Clinical Microbiology Review.* 2002;15(2):167–93.
- Otter JA et al. Surface-attached cells, biofilms and biocide susceptibility: implications for hospital cleaning and disinfection. *Journal of Hospital Infection.* 2015;89(1):16–27.
- Dean L, Forrest H, Fakis A, Craig J, Claxton L, Khare M. Clinical and cost effectiveness of eight disinfection methods for terminal disinfection of hospital isolation rooms contaminated with *Clostridium difficile*. 027. *Journal of Hospital Infection.* Oct 2012;92(2):114–121.
- Laboratory HIR. Sporidical Efficacy Test. Available from: <http://clinell.com/wp-content/uploads/pdf/Clinell%20Sporidical%20-%20Efficacy%20Test.pdf>. 2007.
- Ledwoch K, Robertson A, Luran J, Norville P, Maillard JY. It's a trap! The development of a versatile drain biofilm model and its susceptibility to disinfection. *J Hosp Infect.* 2020 Dec;106(4):757–764.
- Use biocides safely. Always read the label and product information before use.

GAMA Healthcare Ltd.

The Maylands Building, Maylands Avenue, Hemel Hempstead, Hertfordshire, HP2 7TG, UK.
T: +44 (0)20 7993 0030 E: info@gamahealthcare.com www.gamahealthcare.com

