

# clinell®

## Drain Disinfectant

Proven protection against high risk  
and hard-to-kill organisms



# Contaminated drains

Contaminated drains are increasingly found to be the source of ongoing outbreaks of preventable infections.

Transmission of pathogens from contaminated wet and dry surfaces can lead to healthcare-associated infections<sup>1,2</sup>. Specifically, sinks and drains contribute to the transmission of Gram-negative bacteria, including *Pseudomonas aeruginosa*, *Klebsiella*, *Acinetobacter* and carbapenemase-producing *Enterobacteriaceae* (CPE)<sup>3,4</sup>.

## What about the surfaces we can't see?

Surfaces are known to play an important role in the transmission of infections. While surface disinfection is common practice in the effort to reduce HCAs, some areas are harder to reach.

Sinks and showers are breeding grounds for microorganisms and can be the birthplace of biofilms. Hand hygiene, washing and waste disposal supplies drains with bacteria and nutrients, which supports their growth<sup>5</sup>. In these ideal conditions, microbes thrive and form biofilms – protective structures that shelter microbes from the effects of traditional disinfectants.<sup>6</sup>

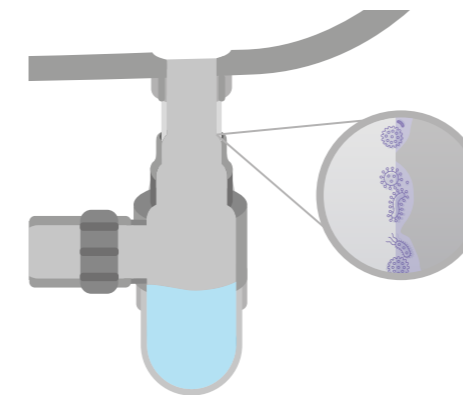
Microbes from the biofilm are seeded back into the environment when the tap or shower is used. Once out of the drain, they spread to nearby surfaces and items, the hands of healthcare workers and subsequently to patients<sup>7,8</sup>.

## Traditional techniques aren't working

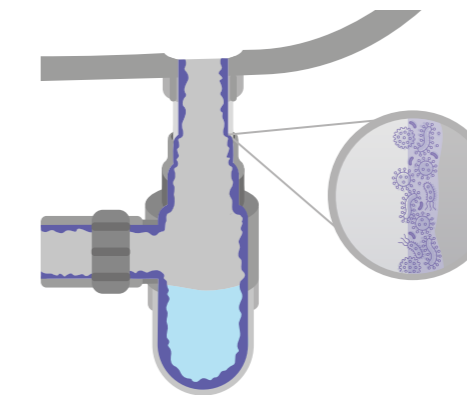
Traditional disinfectants cannot eradicate biofilms, so physical methods including replacement of sanitary hardware and implementation of physical barriers have been deployed to reduce risk<sup>9,10</sup>. Most efforts have proven ineffective, impractical or too expensive.

**Clinell Drain Disinfectant** harnesses the power of peracetic acid to break down wet biofilms and kill the microorganisms sheltering inside.

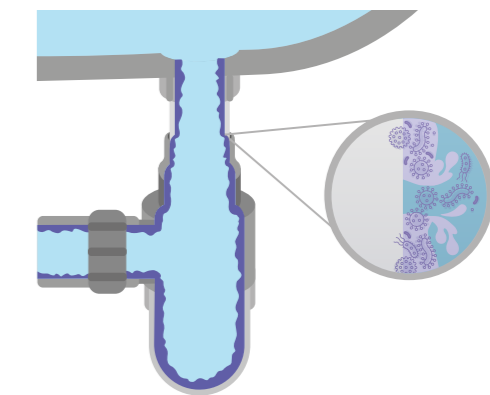
Drains in healthcare settings are frequently contaminated with antibiotic-resistant bacteria.<sup>11,12</sup> Healthcare workers looking to target wet surface biofilms and the microbes sheltered inside must use protocols that wipe out biofilms and prevent their regrowth.



1 Free-floating bacteria attach to the surface of the drain.



2 Bacteria multiply and secrete substances that form a protective biofilm, which cannot be penetrated by traditional disinfectants (at lower concentrations).



3 Running water causes splashback that transfers bacteria to the clinical environment, healthcare workers and patients.



**Eradicates biofilms and prevents regrowth**



**Powerful oxidative technology**



**More effective than chlorine**



**Gentle on drains**

# Clinell Drain Disinfectant

**Powerful peracetic acid-generating technology that eradicates biofilms in 15 minutes.**

Clinell Drain Disinfectant contains peracetic acid-generating granules with proven efficacy against multispecies biofilms including those caused by Gram-negative bacteria.

Our unique formulation destroys protective biofilms living in the drainage systems of hospital sinks and showers.

## Based on patented technology

Powered by a unique formulation based on our patented Clinell Peracetic Acid Wipes, Clinell Drain Disinfectant generates a blend of powerful oxidative agents that break down biofilms' structure and kill the bacteria living inside<sup>13</sup>.

## More effective than chlorine

Traditional treatments can kill bacteria, but may damage drains and enable rapid regrowth, rendering 'low-cost' options anything but. Clinell Drain Disinfectant tackles both bacteria and biofilms throughout the drainage trap, preventing regrowth for at least 4 days.

## Formulated for compatibility

Clinell Drain Disinfectant works at near-neutral pH and has been tested to ensure compatibility with the most common materials found in drains. Unlike chlorine-based disinfectants, Clinell Drain Disinfectant is designed to be used regularly without the worry of causing damage to drains and hospital infrastructure.

## Saves time and money

As part of a planned preventative maintenance programme, Clinell Drain Disinfectant can help to reduce the risk of HCAs and cost of ward closures, hardware repairs and replacements.

## First time use

Use for three consecutive days. Evidence shows this will eradicate biofilms.

## Ongoing use

Use twice a week. Proven to prevent biofilm regrowth.

## In outbreak situations, use daily

**1** Wear appropriate PPE.

**2** Turn on the hot tap/shower for 30 seconds.

**3** Pour entire contents of the sachet into the running water near the drain. Turn off tap/shower immediately.

**4** Place Clinell Drain Disinfectant Indicator Tape over the sink/shower to prevent use.

**5** Wait for at least 15 mins. DO NOT USE SINK/SHOWER DURING THIS TIME.

**6** Turn on the tap for 30 seconds to flush the drain before using sink/shower.

Placing Clinell Drain Disinfectant Indicator Tape over the treated sink/shower indicates to others that the facility should not be used for 15 minutes while the product is working.

# Cutting-edge research

Working with researchers at Cardiff University, we're pioneering new ways to tackle biofilms in our environment<sup>14,15</sup>.

Using their unique model, Cardiff University researchers were able to replicate the conditions within a contaminated drain better than ever before. Their methodology allows them to test Clinell Drain Disinfectant's efficacy in all sections of a drainage trap.

Effective against biofilms in all sections of a drainage trap

Prevents regrowth for at least 4 days

Greater anti-biofilm activity than chlorine-based disinfectants

A chlorine-based disinfectant, sodium hypochlorite (NaOCl) 1,000ppm, was found to only be effective in the front section of the drain – leaving the bacterial biofilm in the middle section intact and able to rapidly regrow. Clinell Drain Disinfectant eradicates biofilms in all sections of the drainage system and prevents regrowth for at least 4 days.

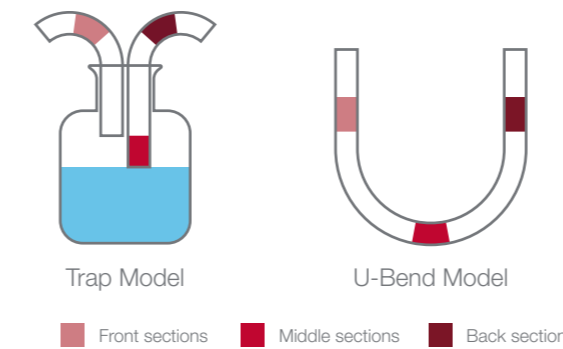


Figure 1  
Depiction of laboratory models based on the two most common hospital drainage systems.

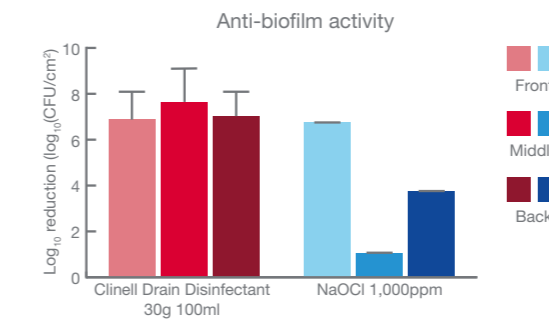


Figure 2  
Anti-biofilm activity of Clinell Drain Disinfectant versus sodium hypochlorite throughout the sections of a drainage trap. Scale guide: greater log reduction gives higher anti-biofilm activity.

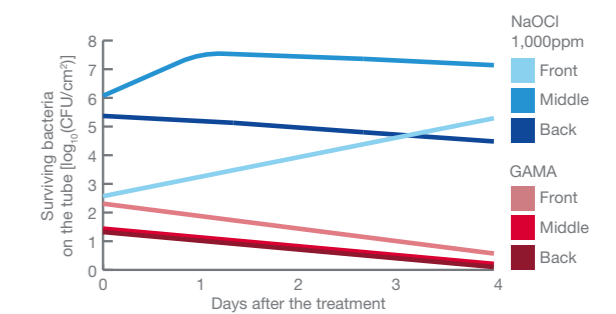
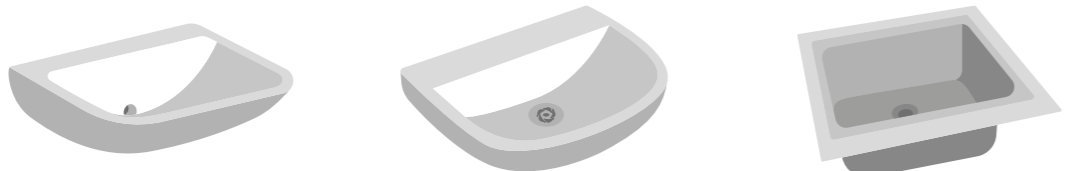


Figure 3  
Surviving bacteria as measured up to 4 days. Sodium hypochlorite is less effective against biofilms and enables rapid recovery. Clinell Drain Disinfectant prevents regrowth.

# Sink variations

Clinell Drain Disinfectant can be used on both sink and shower drains including:

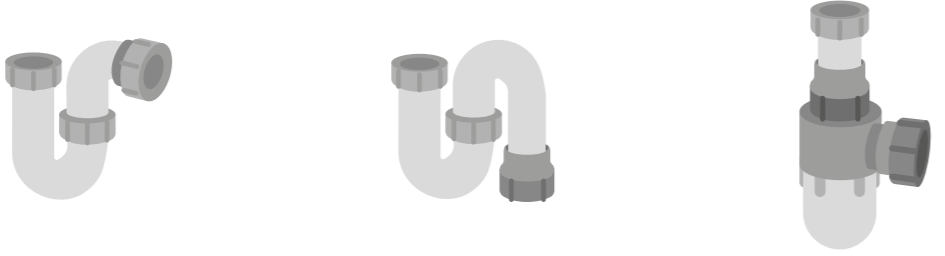
**Sinks and basins**



**Shower traps**



**P-traps, s-traps and bottle traps**



# Product offering

## Complete protection

Practice makes perfect. That's why we provide market-leading clinical training, digital tools and award-winning aftersales support. Our team of specialist IPC Nurse Trainers and Clinical Educators provide on-wards, bespoke training to NHS Trusts and healthcare organisations. They've been shown to significantly improve staff capability ( $P < 0.0001$ ) and significantly reduce the time taken to clean ( $P < 0.0001$ )<sup>16</sup>. Switching to Clinell Universal Wipes (complete with support from our IPC Nurse Trainers) helped a UK teaching hospital reduce their rate of MRSA acquisition by 55%<sup>17</sup>.



### Order info



**Drain Disinfectant**  
24 sachets per box  
Product code: CSDD24  
NHSSC code: MKD85041



**Indicator Tape**  
Single unit  
Product code: CSDDT90  
NHSSC code: MKD85040



### Peracetic Acid Family

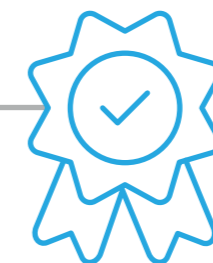
**Peracetic Acid Wipes**  
25 wipes per pack  
Product code: CS25  
NHS code: VJT113



**Wipes Dispenser**  
Single unit  
Product code: CS25D

To find out more, speak to your GAMA Healthcare Area Manager or visit [www.gamahealthcare.com](http://www.gamahealthcare.com)

**100%** of staff felt training would improve their practice.



A total of **182** training days.



Trained over **32,000** staff.

**96%** of staff agree training would make a difference to what they do in the future.



**98%** of staff we surveyed said:

“Training will make things safer for patients”

### References

- Otter JA, Yezli S, French GL. The Role Played by Contaminated Surfaces in the Transmission of Nosocomial Pathogens. *Infect Control Hosp Epidemiol*. 2011;32(7):687-699. doi:10.1086/660363
- Mitchell BG, Dancer SJ, Anderson M, Dehn E. Risk of organism acquisition from prior room occupants: A systematic review and meta-analysis. *J Hosp Infect*. 2015;91(3). doi:10.1016/j.jhin.2015.08.005
- Weingarten RA, Johnson RC, Conlan S, et al. Genomic analysis of hospital plumbing reveals diverse reservoir of bacterial plasmids conferring carbapenem resistance. *MBio*. 2018. doi:10.1128/mBio.02011-17
- Berrouane YF, McNutt L, Buschelman BJ, et al. Outbreak of Severe Pseudomonas aeruginosa Infections Caused by a Contaminated Drain in a Whirlpool Bathtub. *Clin Infect Dis*. 2002. doi:10.1086/317501
- Grabowski M, Lobo JM, Gunnell B, et al. Characterizations of handwashing sink activities in a single hospital medical intensive care unit. *J Hosp Infect*. 2018. doi:10.1016/j.jhin.2018.04.025
- Otter JA, Vickery K, Walker JT, et al. Surface-attached cells, biofilms and biocide susceptibility: Implications for hospital cleaning and disinfection. *J Hosp Infect*. 2015. doi:10.1016/j.jhin.2014.09.008
- Aranega-Bou P, George RP, Verlander NQ, et al. Carbapenem-resistant Enterobacteriaceae dispersal from sinks is linked to drain position and drainage rates in a laboratory model system. *J Hosp Infect*. 2019. doi:10.1016/j.jhin.2018.12.007
- Kotay S, Chai W, Guilford W, Barry K, Mathers AJ. Spread from the sink to the patient: In situ study using green fluorescent protein (GFP)-expressing Escherichia coli to model bacterial dispersion from hand-washing sink-trap reservoirs. *Appl Environ Microbiol*. 2017. doi:10.1128/AEM.03327-16
- Mathers AJ, Vegesana K, German Mesner I, et al. Intensive care unit wastewater interventions to prevent transmission of multispecies klebsiella pneumoniae carbapenemase-producing organisms. *Clin Infect Dis*. 2018. doi:10.1093/cid/ciy052
- Deasy EC, Moloney EM, Boyle MA, et al. Minimizing microbial contamination risk simultaneously from multiple hospital washbasins by automated cleaning and disinfection of U-bends with electrochemically activated solutions. *J Hosp Infect*. 2018. doi:10.1016/j.jhin.2018.01.012
- Muzslay M, Moore G, Alhussaini N, Wilson APR. ESBL-producing Gram-negative organisms in the healthcare environment as a source of genetic material for resistance in human infections. *J Hosp Infect*. 2017. doi:10.1016/j.jhin.2016.09.009
- Buchan BW, Graham MB, Lindmair-Snell J, et al. The relevance of sink proximity to toilets on the detection of Klebsiella pneumoniae carbapenemase inside sink drains. *Am J Infect Control*. 2019. doi:10.1016/j.ajic.2018.06.021
- Humphreys PN, Finan P, Rout S, et al. A systematic evaluation of a peracetic-acid-based high performance disinfectant. *J Infect Prev*. 2013;14(4):126-131. doi:10.1177/1757177413476125
- Ledwoch K, Msgoga M, Pascoe M, Maillard J-Y. Dry surface biofilms: a new challenge for disinfection. In: *American Society for Microbiology*. San Francisco, United States; 2019.
- Ledwoch K, Robertson A, Lauran 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;106(4):757-764. doi:10.1016/j.jhin.2020.08.010
- Shepherd E, Leitch A, Curran E, Infection Prevention and Control Team NHS Lanarkshire. A quality improvement project to standardise decontamination procedures in a single NHS board in Scotland. *J Infect Prev*. Nov 2020;21(6):241-246.
- Garvey MI, Wilkinson MAC, Bradley CW, Holden KL, Holden E. Wiping out MRSA: effect of introducing a universal disinfection wipe in a large UK teaching hospital. *Antimicrob Resist Infect Control*. 2018;7:155.

Use biocides safely. Always read the label and product information before use.

