

Remove Pathogens. Preserve Protection.

Switch to microbiome-friendly cleaning for healthcare environments. Scientifically validated to prevent pathogen transfer and biofilm formation Safe for patients, staff, sensitive equipment and the environment

Traditional surface hygiene relies on chemical disinfection to kill free-floating (planktonic) bacteria. However, over 80% of microbial life on surfaces exists within a biofilm—a tough, sticky shield of extracellular polymeric substances (EPS). Standard disinfectant wipes fail to penetrate this shield, leaving dormant bacteria intact to rapidly multiply.



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• Science-Based Physical Cleaning in Healthcare

An evidence-based approach for safer routine ward cleaning

● Agenda

1. Challenges of Routine Cleaning
2. Effective Cleaning Practices
3. A Smarter Cleaning Framework

- Challenges of Routine Cleaning

Cleaning that fits risk

Cleaning is a clinical control

- Daily cleaning reduces contamination that can contribute to healthcare-associated infections.
- Lower chemical exposure supports staff respiratory health and skin safety.
- Less harsh chemistry helps protect finishes, seals, and high-touch surfaces.

Match method to risk

- Regular inpatient wards typically need reliable soil removal, not routine disinfection.
- Avoid default daily biocides when there is no added epidemiologic benefit.

Separate routine vs. response

- Use **physical cleaning** for maintenance in non-critical zones.
- Reserve disinfection for outbreaks, critical-care areas, and defined spill events.



The Cost of Overuse



Limited upside in standard wards

- Universal daily disinfectants in regular wards show little added epidemiological benefit.
- They add chemical load even when thorough physical cleaning is sufficient.

Stewardship and resistance pressure

- Routine low-level biocide exposure creates selection pressure on surface microbes.
- This can encourage hardier organisms and contribute to AMR concerns.



Operational and staff safety costs

- Frequent chemicals increase residue buildup, infrastructure wear, and pitting over time.
- Staff face avoidable WHMIS burden, respiratory irritation, and dermatitis risks.

How Resistance Can Emerge

Selection pressure on surfaces

- Frequent low-level disinfectant exposure can select for hardier survivors.
- These organisms may upregulate **efflux pumps** to expel disinfectants.

Cross-resistance risk

- Efflux pumps can also push out important antibiotics used in care.
- That link raises stewardship concerns beyond environmental cleaning outcomes.

What this means for routine practice

- Daily chemistry choices can influence AMR pressures across the ward ecosystem.
- Prioritizing physical extraction helps reduce routine **selection pressure**.

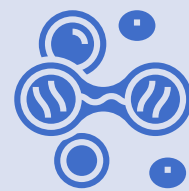


Residues Enable Biofilms



Hidden residue after “one-step” use

- Some disinfectant-detergents leave a thin film after wiping and drying.
- That residue can become a scaffold for microorganisms to persist.



Biofilms become harder to clear

- Survivors can organize into protective **biofilms** on the remaining film.
- Biofilm-associated pathogens can be up to **1,000x** more tolerant.



Clinical implication for wards

- Residue-driven persistence can undermine routine cleaning reliability over time.
- It can also complicate later removal and clinical treatment responses.

Contact time breakdown

Efficacy depends on wet time

- Label claims assume the surface stays visibly wet for minutes.
- If it dries early, the intended microbe reduction may not occur.

Real-world workflow breaks the model

- High pace and large areas make consistent wet contact hard.
- Fast evaporation and thin wipes shorten effective dwell time.

The practical risk

- Partial exposure can leave survivors, undermining reliable decontamination.



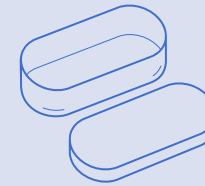
- Effective Cleaning Practices

Remove, Don't Redistribute



Wiping can spread contamination

- One-step disinfectant wiping can move live microbes before kill time.
- Adjacent “clean” touchpoints may be cross-contaminated during the wipe.



Design for lift-and-remove

- Prioritize physical extraction so microbes leave the surface immediately.
- Standardized friction-based testing shows **no transfer** to nearby surfaces.

European Practice Models



Routine wards: clean, don't disinfect

- Germany's RKI/KRINKO prioritizes mechanical cleaning with neutral surfactants.
- Guidance indicates no added epidemiologic benefit from universal ward disinfection.



Disinfectants used by indication

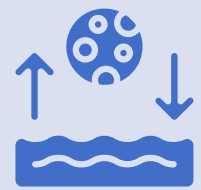
- The Netherlands restricts disinfectants to outbreaks and defined spill scenarios.
- This avoids routine chemical buildup and supports **AMR stewardship** goals.



Quality and worker-safety focus

- Nordic INSTA 800 emphasizes measurable cleaning quality via mechanical extraction.
- Reducing routine chemical use is linked to fewer respiratory and skin issues.
- UK and Australia detergent clean regular wards

Two-Wipe Method



Wipe 1: Lift and suspend

- Use friction to loosen soil and break surface tension.
- Disrupts residues so microbes move into the cleaning solution.



Wipe 2: Remove what was lifted

- Absorb remaining moisture and the suspended contamination.
- Leaves the surface dry, reducing chances of re-spread.



Why it works in routine wards

- Prioritizes **physical extraction** over relying on chemical kill time.



● Why Sodium Phytate

Disrupting biofilm “glue”

- Sodium phytate chelates calcium and magnesium that stabilize biofilms.
- This weakens the matrix, helping soils and microbes release faster.

Improving physical extraction

- With fewer ion-bound films, wiping can lift contamination more completely.
- It supports a cleaner surface without relying on routine biocides.

Clinical value in tiered cleaning

- Creates a more “bare” surface before any targeted disinfection step.
- Helps ensure disinfectants are used where they matter most.

- **A Smarter Cleaning Framework**

Tiered Cleaning Framework



Tier 1: Standard inpatient areas

- Use neutral, biocide-free physical cleaning for routine ward maintenance.
- Focus on consistent soil removal without leaving chemical film behind.



Tier 2: Higher-risk situations

- In critical care or outbreaks, clean physically first to remove soils.
- Then apply disinfectants selectively where risk and indications are clear.



Operational outcomes

- Supports infection prevention, antimicrobial stewardship, staff safety, and sustainability.

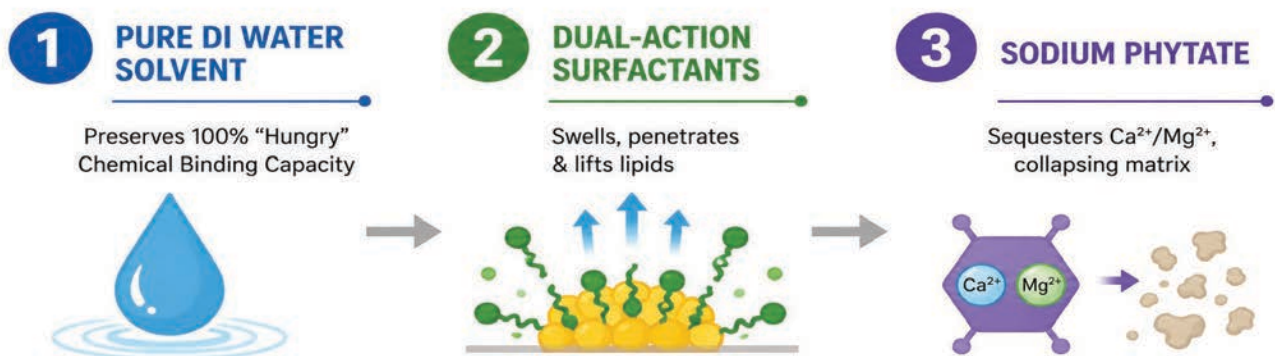
Cogent One Health™ – Clean with Purpose

This master summary compiles the exact biochemical mechanisms, validation data, and peer-reviewed evidence establishing Sodium Phytate as a disruptive alternative to traditional hospital disinfectants. By executing a simple, daily Two-Cloth “Wipe Dry” routine using Cogent One Health RTU (formulated with pure Deionized Water and targeted surfactants), hospitals can completely drop chemical-kill agents in non-critical zones, effectively clearing the dry surface biofilm reservoir while allowing a healthy, protective environmental microbiome to re-establish.

In ICU and critical care use process to deep clean and remove bio films prior to application of disinfectant.

I. THE COGENT FORMULATION: CORE MECHANISMS

Unlike legacy disinfectants that attempt to chemically “kill” bacteria through an impenetrable outer layer, this non-bio-cidal solution attacks the structural foundation of the biofilm matrix using three highly targeted steps:



1. The Pure Deionized (DI) Water Solvent: Standard facility tap water contains minerals that pre-saturate cleaning chemistry. Using 100% DI water ensures that every single binding site on the sodium phytate molecule remains completely open, unbonded, and “hungry” to pull minerals out of the environment.

2. The Dual-Action Surfactant System: A targeted blend of anionic and nonionic surfactants lowers surface tension. Anionic surfactants introduce a negative charge that forces the dense biofilm matrix to swell and unfold, while nonionic surfactants penetrate microscopic cracks to emulsify surface skin lipids and oils.

3. The Sodium Phytate “Ionic Crowbar”: Sodium phytate is a highly structured, plant-derived organophosphate chelating agent. The dense framework of a dry surface biofilm relies entirely on divalent cations—specifically Calcium (Ca^{2+}) and Magnesium (Mg^{2+})—to act as structural “bridges” that cross-link and harden the matrix. Sodium phytate aggressively captures and sequesters these ions away from the biofilm, forcing its physical structure to destabilize and collapse.

II. THE PEER-REVIEWED EVIDENCE BASE

This strategic use of sodium phytate (phytic acid salts) is heavily backed by independent, international microbiology and medical literature:

*Matrix Breakdown Against Superbugs: Research published in Antimicrobial Agents and Chemotherapy and Frontiers in Cellular and Infection Microbiology demonstrates that Sodium phytate complexes rapidly penetrate mature biofilms, drastically lowering the minimum biofilm eradication concentration (MBEC) for high-risk pathogens like MRSA and *Pseudomonas aeruginosa*. *Rapid Destruction of Biomass: A landmark study in the Journal of Oral Microbiology confirms that phytate salts dissolve the Extracellular Polymeric Substance (EPS) framework by stripping away metal stabilizers, converting a hardened colony into loose, easily displaced cells. *The Science of Surface Pre-Conditioning: The foundational validation for the non-rinse protocol comes from Microbiology Spectrum (2023), which explicitly proved that “phytic acid was found to cause significant inhibition of dual-species biofilm formation when used as a surface preconditioning agent”. Further data in Colloids and Surfaces B: Biointerfaces shows that leaving the trace phytate film creates an electrostatic shield that actively repels initial bacterial docking. [1, 2, 3]

III. CLINICAL VALIDATION: THE CREMCO QCT3 BENCHMARKS

To verify this non-disinfectant strategy under realistic hospital conditions, the protocol was subjected to independent Cremco QCT3 (Quantitative Carrier Test Tier 3) testing—a high-friction, organic-soil standard. The results confirm clinical-grade extraction:

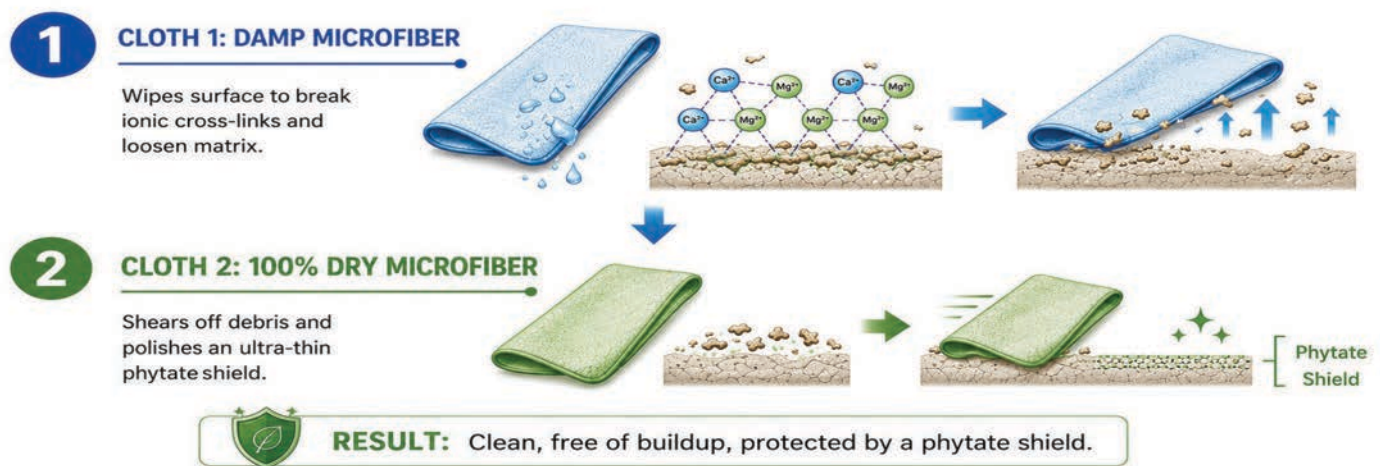
*99.9% Physical Bacterial Removal (3-Log Reduction): Confirms that de-solidifying the EPS cross-links allows a cloth to completely sweep away dense bacterial communities.

*97.8% Non-Enveloped Viral Removal: Proves the surfactant blend breaks the severe electrostatic forces pinning highly resilient viral capsids (e.g., Norovirus) to hospital substrates.

*Near-Zero Cross-Contamination Transfer: The QCT3 transfer tier verified that the method prevents almost all transfer to adjacent surfaces during the wiping process, ensuring that pathogens are securely locked into the cleaning cloth rather than spread down a row of beds.

IV. THE DAILY ROUTINE: THE TWO-CLOTH “WIPE DRY” WORKFLOW [4]

To eliminate airborne aerosol exposure for staff and patients, spraying is completely banned. The daily routine is a continuous, mechanical conditioning sequence:



*Step 1: Apply Cogent One Health RTU directly to Cloth 1 (Blue Microfiber) using a squirt-top bottle or extract a moistened wipe. Wipe all high-touch ward surfaces systematically from top to bottom.

*Step 2: Follow instantly behind with Cloth 2 (Green Microfiber), which must be kept completely dry. Buff the surface to a flawless, streak-free shine.

*Step 3 (The Conditioning Effect): Do not rinse. The dry cloth naturally shears away the loose biomass while spreading the remaining unevaporated solution into a self-limiting, sub-micron layer. As the moisture flashes off, the sodium phytate settles into a smooth, non-tacky protective shield.

In critical care ,ICU , Isolation Discharge cleans when advised by Infection control apply disinfectant after cleaning.



V. WARD-LEVEL BENEFITS: SUBSTRATE SAFETY & MEDICAL ECOLOGY

Transitioning general hospital wards to this continuous surface conditioning loop yields major clinical and asset-protection advantages over traditional disinfectants:

*100% Asset Protection: Standard oxidizers cause environmental stress cracking (ESC) on electronics, hospital mattress covers and micro-pitting on steel. This formulation is completely non-corrosive; it preserves expensive touchscreen monitors and plastic bedpanels and mattress covers, while acting as a natural rust-inhibiting conversion layer on stainless steel.*Re-Establishing Beneficial Microbiomes: Aggressive chemical disinfection wipes out harmless background bacteria, creating a dangerous biological vacuum that is quickly colonized by hyper-resistant superbugs. Dropping disinfectants outside of critical care zones (like the ICU) removes this selective evolutionary pressure.*Competitive Exclusion: The daily routine extracts dangerous, deep-seated pathogen biofilms while leaving a non-toxic surface energy. This allows a healthy, balanced, non-pathogenic environmental microbiome to re-establish on the ward, naturally crowding out invaders through resource competition.

[1]Antimicrobial activity and surface preconditioning study, Microbiology Spectrum:

<https://journals.asm.org/doi/abs/10.1128/spectrum.00267-23>

[2][Natural Anti-biofilm Agents: Strategies to Control Biofilm-Forming Pathogens

<https://pmc.ncbi.nlm.nih.gov/articles/PMC7658412/>

[3][Antimicrobial Activity of Phytic Acid: An Emerging Agent in Endodontics

<https://www.frontiersin.org/journals/cellular-and-infection-microbiology/articles/10.3389/fcimb.2021.753649/full>

[4] 5 Effective Methods to Remove Biofilm

<https://www.colgate.com/en-us/oral-health/plaque-and-tartar/biofilm-removal-three-effective-methods>



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Visit site for detailed information and Safety Data Sheet



Product Formats

9506-4: 4 x 3.78L case

9506-6: 6 x 946ml case

9506-12: 12 x 70-count wipes per case