
Microbiome-Friendly Cleaning Protects Public Health Better Than Disinfectants

Cogent One Health replaces chemical warfare with mechanical extraction — removing 99.9% of surface bioburden while letting a healthy microbiome crowd out the invaders.

THE SHIFT

**Extract,
don't
poison.**

CENTRAL THESIS

Cleaning has been fighting the wrong war

Traditional disinfection tries to exert chemical power over microbes — leaving wet films, breeding resistance, and degrading assets. Cogent One Health cooperates with nature instead.

- **Two mechanical steps** — sodium phytate disrupts biofilm, a dry microfiber pass locks it away.
- **99.9% bioburden removed** — 50× cleaner than hospital standard, no biocide.
- **Competitive exclusion** — a healthy microbiome re-establishes and crowds out superbugs.

THE RESIDUAL FILM

Wet surfaces act as vectors — moving live pathogens from one area to the next.

THE PROBLEM

Disinfectants leave a live, wet vector behind

Moisture films with live microbes

Single-pass wiping leaves a film still carrying viable pathogens — standard wipes lack the binding capacity to remove them.

Cross-contamination by transfer

Insufficient binding and transfer rates spread pathogens to multiple adjacent surfaces during the wipe itself.

Harsh biocides backfire

Chemical oxidizers degrade materials, add toxicity, and select for antimicrobial-resistant superbugs.

Four physical phases replace one chemical kill

01

Biofilm Disruption

Sodium phytate strips metal ions, collapsing the EPS matrix that anchors microbial communities.



02

Friction Lift

Physical shearing at 3 lbs down-force mechanically removes the loosened cells.



03

Capillary Lock

An immediate dry microfiber pass extracts 99.9% of fluid and soils into the cloth.



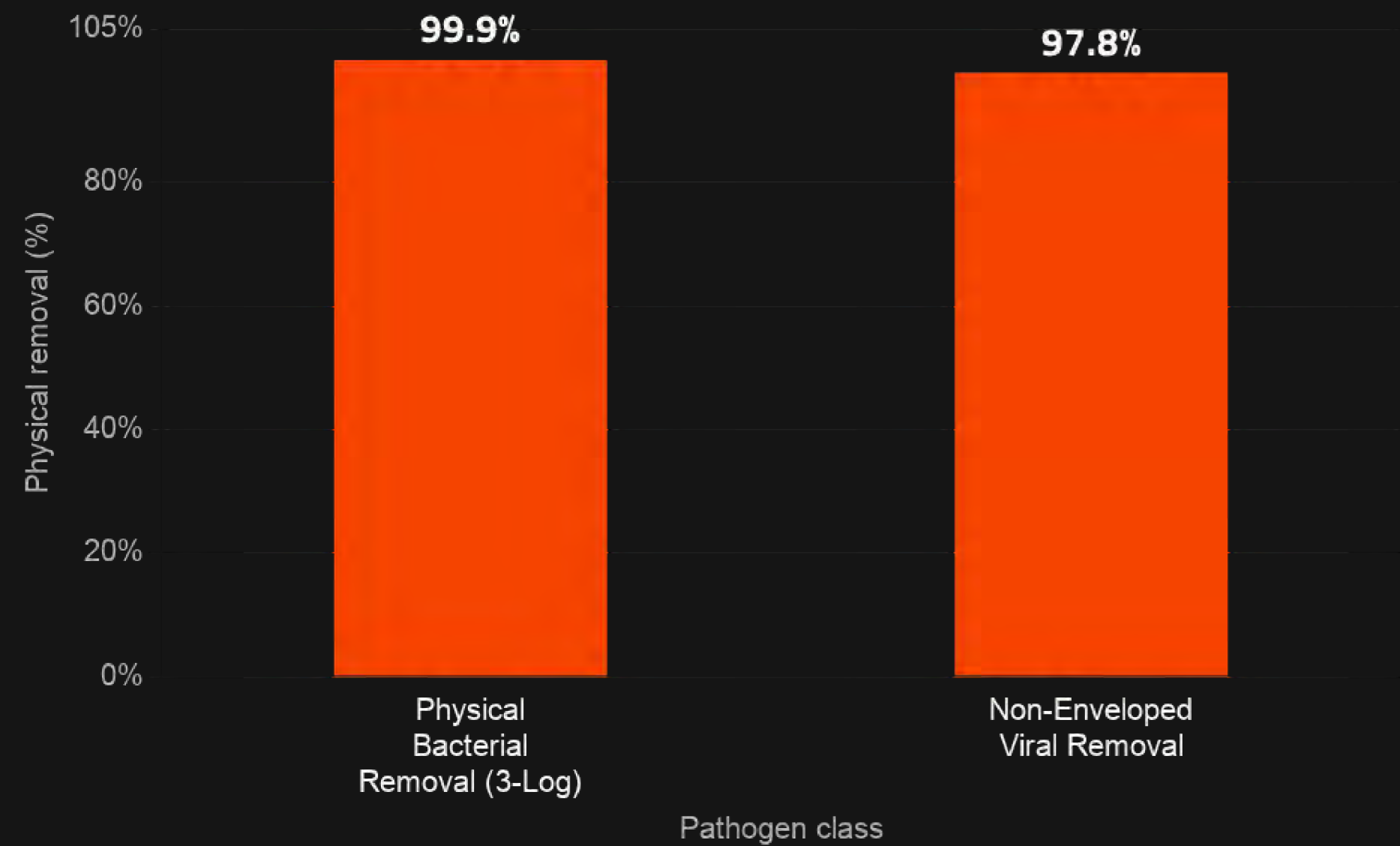
04

Immobilization

Residual bioburden is sealed under a dry phytate mineral crust that prevents replication.

Step 1: Cogent RTU on Cloth 1 (blue), top-to-bottom. Step 2: dry Cloth 2 (green) buffs to a streak-free shine.

Independent CREM Co QCT-3 testing confirms clinical-grade removal



Source: CREM Co Labs Quantitative Carrier Test Tier 3 (high-friction, organic-soil standard); % physical removal.

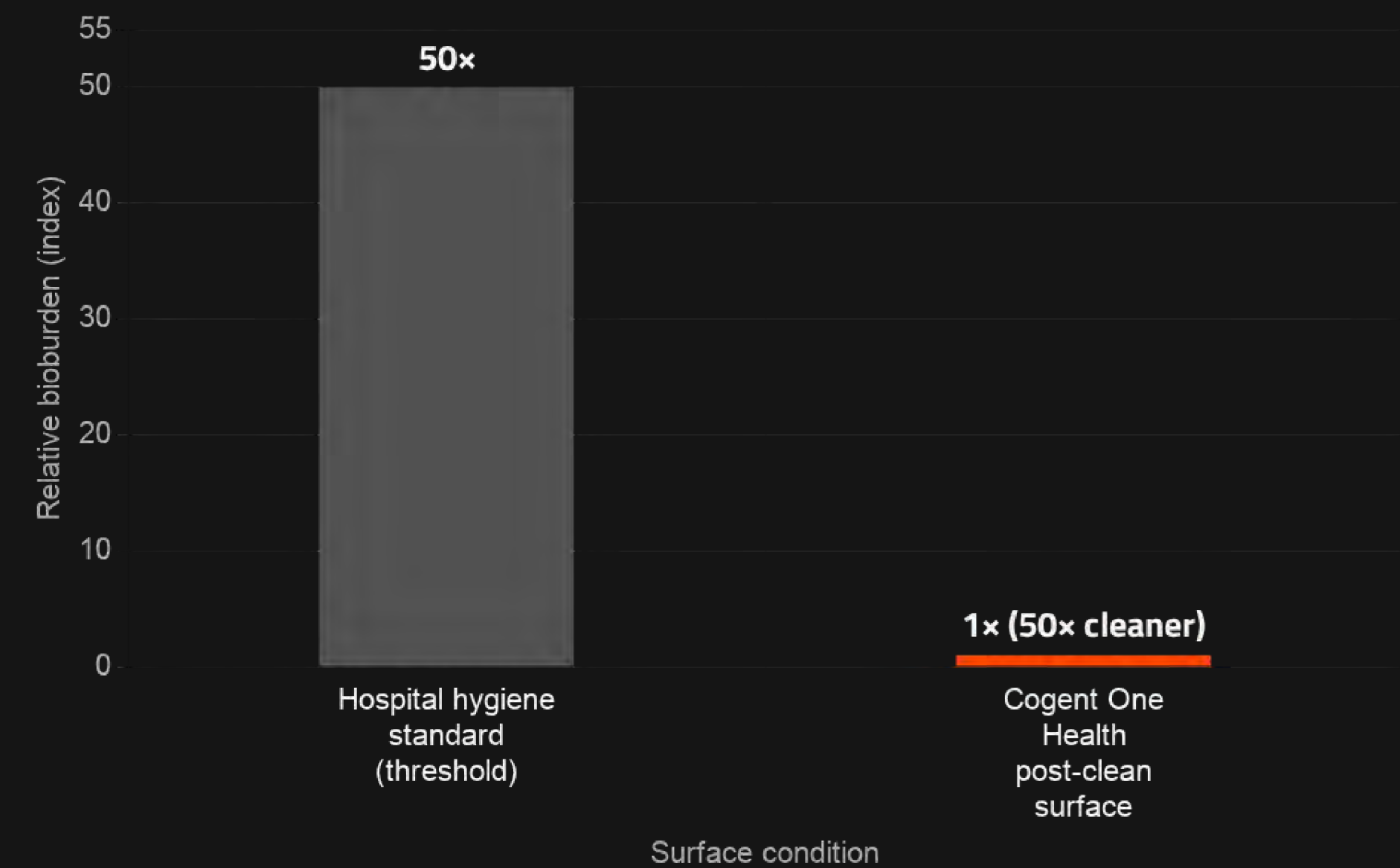
The two-step method was run under realistic hospital conditions — heavy friction, organic soil. Removal is **physical, not chemical**: de-solidifying the EPS cross-links lets the cloth sweep away whole bacterial communities and even the electrostatically-pinned viral capsids.

TRANSFER TIER

Near-zero

cross-contamination to adjacent surfaces — pathogens lock into the cloth, not onto the next surface.

Post-clean surfaces sit 50× below the hospital hygiene standard



99.9%

reduction in surface pathogens — a 3-log drop in bioburden.

50×

cleaner than the accepted hospital surface standard after a single clean.

Below dose

the surface can no longer deliver enough viable cells to reach the infectious-dose threshold.

Source: Cogent One Health validation; relative surviving bioburden, indexed to the hospital hygienic threshold = 50.

WHY IT WORKS

Four independent barriers break the chain of transmission

01 — VECTOR REMOVED The immediate dry wipe pulls out the fluid vector, so there is near-zero transfer to skin or adjacent surfaces — proven by QCT-3.	02 — CELLS IMMOBILIZED Survivors are entombed under a sodium phytate mineral shield that blocks replication and survival.
03 — SURFACES MADE INERT Surfaces are left dry, inert, and below hygienic thresholds — clinically non-infectious.	04 — DOSE NOT MET The cleaned surface simply cannot deliver enough viable cells to reach an infectious dose.

Where it runs solo — and where infection control adds a disinfectant

Everyday high-touch wards

- **Cloth 1 (blue):** apply Cogent RTU, wipe systematically top to bottom.
- **Cloth 2 (green, dry):** follow instantly, buff to a streak-free shine.
- **Sink drains:** coat the trap with 250 ml — it keeps chelating metal ions and lifting biofilm the longer it dwells.

Critical-care exception

- In ICU, isolation, and discharge cleans, apply a disinfectant **after** the Cogent clean when advised by infection control.
- Outside these zones, dropping disinfectants removes the selective pressure that breeds resistance.
- It is a safe, non-hazardous, neutral cleaner — no harsh biocide handling.

SECTION V · WARD-LEVEL BENEFITS

Beyond hygiene: protect the asset, restore the ecology

- 100% ASSET PROTECTION** Non-corrosive — no stress-cracking of touchscreens, mattress covers or micro-pitting of steel; acts as a rust-inhibiting layer on stainless.
- NO BIOLOGICAL VACUUM** Dropping disinfectants outside critical care removes the selective pressure that lets hyper-resistant superbugs colonize.
- COMPETITIVE EXCLUSION** Deep pathogen biofilms are extracted while a healthy, non-pathogenic microbiome re-establishes and crowds out invaders.

READY FOR PUBLIC HEALTH ADOPTION

Stop fighting microbes. Start managing surfaces.

99.9% bioburden removed, near-zero transfer, zero harsh biocides — a dry, inert, clinically non-infectious surface, validated and ready to deploy ward-wide.

Cogent Environmental Solutions · Michael Rochon · 705-434-4489 · rochon@cogentenvironmental.ca · cogentenvironmental.ca