

COMPARISON GUIDE

UV Light Disinfection vs. GEIA Dry Misting

UV light systems and GEIA hypochlorous (HOCl) dry misting address the same problem in very different ways. This guide walks through where each one fits, so you can choose the right tool for your facility.

1. Technology Overview

UV LIGHT DISINFECTION

- Uses UV-C light emitted from lamps on a mobile tower or fixed unit.
- Works by direct exposure — light travels in straight lines.
- Only reaches surfaces and air the light directly illuminates.
- Typically run in cycles from one or more positions in the room.

GEIA DRY MISTING

- Produces a 1–3 micron hypochlorous mist that behaves more like a gas than a liquid.
- Fills the whole room — air, surfaces, and the hard-to-reach places.
- A wet application that doesn't leave surfaces wet.
- Runs on a schedule, from portable (AYRUS), set-in-place (ROGE) or large mobile (LUVIAN) units.

2. Coverage: Line-of-Sight vs. Whole-Space

UV LIGHT DISINFECTION

- Reaches only what the light can "see."
- Anything behind, under, or inside an object sits in shadow — behind the bed, under chairs, the back of the door, inside cabinets.
- Covering shadowed areas often means moving the device and running another cycle.

GEIA DRY MISTING

- No line-of-sight limit — the mist spreads through the entire space.
- Reaches fabrics, vents, ceilings, corners and crevices.
- No repositioning to "catch" shadowed zones.

3. Air, Odors & Hard-to-Reach Surfaces

UV LIGHT DISINFECTION

- Treats only the air passing through the light path at that moment.
- Does not address odors.
- Limited on fabrics and textured or shadowed surfaces.

GEIA DRY MISTING

- Treats the whole volume of air in the room.
- Addresses odors at the source by oxidizing odor molecules.
- Reaches soft surfaces, textured surfaces, and places that are hard to wipe.

4. Impact on Operations

UV LIGHT DISINFECTION

- The room must be cleared during every cycle.
- Cycles commonly run 15–45 minutes per position, often from several positions.
- Staff time is needed to move, set up, and monitor the device.

GEIA DRY MISTING

- Runs while people stay in the room — no clearing, no downtime.
- Runs automatically on a schedule; minimal labor.
- One protocol across very different spaces: patient rooms, buses, classrooms, lobbies, kennels.

5. Safety in Occupied Spaces

UV LIGHT DISINFECTION

- UV-C is an eye and skin hazard; people must be out of the room.
- Requires controls and signage to prevent accidental exposure.

GEIA DRY MISTING

- Hypochlorous acid is pH-neutral — the same molecule the human immune system produces.
- Designed for occupied spaces; breaks down to ordinary saline and leaves no residue.

6. Maintenance & Cost Considerations

UV LIGHT DISINFECTION

- A major capital purchase per device.
- UV lamps must be replaced on a schedule.
- Labor cost for repositioning and room-clearing time.

GEIA DRY MISTING

- Lower upfront cost per space.
- Consumable: pre-measured, EPA-registered HOCl tablets — no mixing math.
- Simple routine maintenance (periodic descaling).

7. Summary Table

Feature	UV Light Disinfection	GEIA Dry Misting
Coverage	Line-of-sight only	Whole-space — air and surfaces
Air treatment	Only air passing through the light	Whole-room air
Fabric, vents, ceilings, crevices	Limited — shadowed areas missed	Yes
Odors	No	Yes
Room must be cleared	Yes	No — runs in occupied spaces
Time per typical room	15–45 min per cycle, often multiple positions	Minutes
Labor	Device moved and monitored between zones	Runs on a schedule
Upfront cost	Higher — major capital purchase per device	Lower
Consumables	Replacement UV lamps	EPA-registered HOCl tablets
Pre-cleaning required	Yes — UV does not penetrate soil	Yes — per EPA label

8. The Simple Answer

UV light treats what it can see, while the room is empty. GEIA dry misting fills the whole space — the air, the surfaces, and the places you can't reach — while people keep working.

9. When Each One Makes Sense

UV LIGHT MAY FIT WHEN

- You already have a UV protocol your team runs well.
- A strict no-liquid policy applies to certain equipment.
- The space is small and simple, with no shadows or fabrics.
- Your schedule already includes mandatory room-clearing windows.

GEIA DRY MISTING FITS WHEN

- You need to treat the whole volume of air, not just a beam path.
- You need to reach fabrics, vents, ceilings and corners.
- You can't — or don't want to — clear the space.
- Odor is part of the problem.
- You want one protocol across many types of spaces.
- You want a lower upfront and per-cycle cost.

10. Where GEIA Fits in Your Cleaning Protocol

GEIA dry misting is a layer on top of the cleaning you already do — never a replacement for it.

1 · Clean

Sweep, mop, and remove soil as usual.

2 · Wipe high-touch

Doorknobs, rails, switches.

3 · GEIA runs alongside

Air, surface and odor treatment that reaches what wiping misses.

4 · Stay in the room

No clearing, no downtime.

NEXT STEP

See GEIA in your facility.

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GEIA dry misting equipment is an application method and makes no disinfection claims of its own. All efficacy claims, use sites, contact times and pre-cleaning requirements are governed by the EPA-registered label of the HOCl tablet used. Always follow the label. UV information reflects general characteristics of UV-C disinfection equipment; individual products vary.