



## Air Scrub™ Airborne Mould Removal Process

### 1. Description

Inhalation of spores, hyphal fragments, and associated bacteria is the major route of exposure and a cause of mould- and building-related illness. The WHO estimates that exposure to airborne biological particles can increase the dose by 40-fold.

**Airscrub™ is a patented, medically sound air decontamination process.**

AirScrub™ is the only medically approved, evidence-based system to remove the most harmful exposure route: inhalation. It's not the mould you can see or smell that causes health effects, but the inflammagens and toxins released and what you inhale. It is the only system that removes toxic, inflammatory particles from the air within hours, and you may actually see that the air is cleaner.

### Not to be confused with Air Scrubbing

Established air scrubbing procedures rely on Negative Pressure HEPA units, which have been shown to be very limited in removing airborne contamination at varying levels; **see section 11 for the government HSE paper.**

### Brief description

The smaller hyphal fragments of mould, which are the most hazardous, remain airborne for months at higher levels of the room and building. HEPA filters are only effective in the restricted area or layer of air to which they are located. The referenced paper shows that to be effective; you would need several HEPA filters at different levels and on opposite sides of the room.

### 2. Purpose of the Process

The Air Scrub system is a chemical fogging protocol designed to cause airborne particulate matter, including mould spores, fragments, hyphal structures, and other biologically active particles, to coagulate and fall onto horizontal hard surfaces. A dry glycerin film temporarily locks these fallen particles in place, preventing re-aerosolisation for up to four days.

### 3. Benefit

This is the fastest, most efficient, and economical method of cleaning the air in any size property.

### 4. Critical Warnings and Limitations

This process is for air decontamination only and does not treat the root cause of contamination. Fresh food must be put away prior to treatment, and smoke alarms will be covered by the



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technicians

All pets must be removed during the process

No entry to the property for 6 hours post-treatment without suitable PPE

### 5. Post-Treatment Cleaning Responsibilities

All horizontal surfaces (including overspray zones such as windows) must be thoroughly wiped down using:

- A 7:1 water to Vodka solution (denatured grain alcohol or equivalent)
- Disposable Swiffer cloths or floor pads (do not reuse or double-dip)
- Cleaning is labour-intensive but straightforward.
- Disposable gloves (such as nitrile or latex) must be worn to prevent skin drying or irritation from alcohol. Cleaning of horizontal surfaces must be completed within 4 days of fogging to prevent secondary aerosolisation as the film holding the fallen particles decays.

### 6. Inaccessible areas

Where cleaning is impractical, for example, in a loft, we apply a locking agent to capture the fallen particles and hold them to prevent re-release. This product may last for years. This is an extra cost and is not recommended for occupied areas

### 7. Safety Precautions

During Treatment:

- Do not enter treated areas for 6 hours post-application.
- Sodium Borate is non-toxic but may cause respiratory irritation if inhaled during the fogging or settlement period.
  - All fire/smoke alarms must be isolated to prevent false alarms.
  - Pets, open food, and sensitive items must be removed or covered.
  - Fogging technicians will use full-face battery-powered respirators.

All settled material must be physically removed within this 4-day period. Otherwise, the decaying film will allow particles to become airborne again. To reduce costs, the client must undertake this cleanup wearing protective gloves. Post-treatment cleaning is mandatory and the sole responsibility of the client to organise and undertake.

### 8. After Treatment:

The glycerin film is dry upon re-entry but may be slippery if surfaces become wet.

- Caution should be exercised, particularly on hard floors.



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## 9. Process Overview: Airborne Contaminant Capture

- Step 1 – Coagulation Fog: A fog containing sodium borate is introduced. Droplets (40 microns) collide with airborne particles, encapsulating and coagulating them.
- Step 2 – Flocculation Fog: A secondary fog causes these now-larger droplets to flocculate—i.e., they gain weight and fall from the air.
- Step 3 – Surface Binding: The falling particulates settle on horizontal surfaces and are bound in a fast-drying glycerin film, preventing re-aerosolisation.
- Step 4 – Manual Removal: All surfaces must be wiped with an alcohol solution, and we recommend one litre of cheap vodka diluted with 7 parts water.

## 10. Application Notes

Technicians begin fogging from the highest level downward, using sweeping action to ensure full room saturation.

Due to the generation of microdroplets, an average 3-bedroom property uses <1.5 litres of fogging fluid—the moisture impact on materials is minimal.

Fog is not sprayed directly on surfaces, so devices like TVs, books, and electronics are not at risk. However, sensitive or absorbent items may be covered as a precaution.

Cupboards and drawers remain closed—this is not a direct surface treatment.

## 11. Scientific and Regulatory Basis

This chemical air scrubbing method is substantially more effective than HEPA-based Mould protocols follow the principle of physical removal, not just microbial kill. This Air Scrub process aligns with Option 1 in recognised mould remediation guidelines, which involves removing airborne particles followed by post-settlement cleaning.

Reference: HSE Report RR988 – “An evaluation of negative pressure units in contaminated environments.”

[www.hse.gov.uk/research/rrhtm/rr988.htm](http://www.hse.gov.uk/research/rrhtm/rr988.htm)

## 12. Cleaning Equipment and Instructions

### Materials:

- Vodka (cheap grain alcohol) diluted 7:1 with clean water
- Swiffer dry sweeping cloths or equivalent (Flash, etc.)
- Nitrile gloves (non-latex options available)

### Cleaning Protocol:

- Dip each cloth once only in cleaning solution—do not double-dip.
- Wipe each surface systematically, rotating the cloth sides.



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- Discard clothes once used; replace them with new.
- Use floor pads for large surfaces or walls.

#### Suppliers (examples):

- Swiffer Wipes - Amazon UK or TESCO etc.
- Swiffer Floor Pads - Amazon UK or TESCO etc

**Wet carpet extractor, see VAX**

#### Efficiency and Success Factors

The Air Scrub system significantly reduces the risk of inhalation of airborne particles. However, post-treatment cleaning is critical—if particles are not removed before the glycerin film decays, contaminants will become airborne again.

No form of air cleaning is complete without thorough post-settlement particle removal.

#### Why do we recommend that you clean up?

- First of all, this is not a high risk or hazard, and airborne contamination is now locked onto the horizontal surfaces.
- It's a time-consuming job best left to homeowners who normally do a better job than most low-paid cleaners. You can, of course, use cleaning companies, but you're advised to monitor.
- Usually, just horizontal surfaces are cleaned, but carpets and soft furnishings are best professionally cleaned or use DIY carpet extraction equipment, often available at stores or consider purchasing low-cost wet extractors.