Factsheet

Preventing Mold Growth in Cold Rooms

Mold is the general name for a group of fungi that is commonly found on damp or wet materials. Mold thrives in warm, damp, and wet environments especially in the presence of organic material and may appear to be either light or dark colored.

How does mold get into a cold room?

Mold and fungal spores are ubiquitous and flourish where there is water damage, elevated and prolonged humidity, or dampness. Also, cellulose-containing materials sustain mold growth which can contaminate research materials.

How do I know if a cold room has a mold problem?

• Visible mold on surfaces (see Figure 1). • Condensation observed on the outside of the door (see Figures 2 and 3).

• Rusting cans or other metal surfaces in the cold room.

•Musty odor.

•Mold contamination of research samples.

Figure 1. Visible mold on cold room ceiling grid and wall.

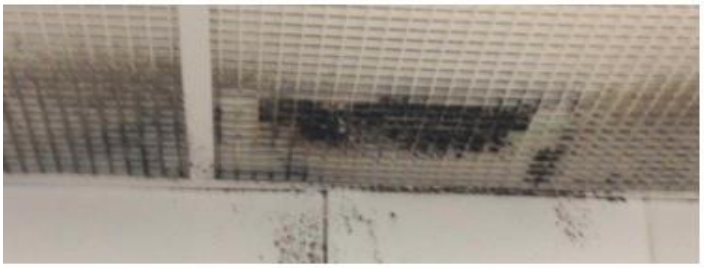

Figure 2. Visible condensation on cold room door.

Figure 3. Visible condensation on cold room door handle.

What I need to know...

• Maintain indoor relative humidity levels below 60%.

• Ensure cold storage door latches and gaskets are in good condition.

• Dry out and clean water-damaged materials, or if heavily damaged, remove and replace.

• Discard materials that are wet for more than 48 hours since they are likely to produce mold growth.

• Do not any store paper or cardboard in cold rooms. The storage of cellulose containing materials is a leading cause of mold growth.

Control moisture and nutrients to control mold growth.

How can mold growth be prevented?

Preventing mold growth in cold rooms is achieved by controlling condensation/moisture and removing materials contributing to mold growth. The following preventive measures need to be taken:

- Ensure cold storage door latches and gaskets are in good condition.
- Place a gauge in cold room to monitor relative humidity (RH). Maintain RH levels below 60%.
- Keep air conditioner drip pans and drain lines clean.
- Use stainless steel shelves instead of wood shelves or cabinets. Open stainless-steel shelves permit air flow throughout the entire storage area.
- Do not prop open door.
- Do not spend too much time in cold room. Limit 2 hours per 25 hours (1 person 2 hours, 2 people 1 hour each).
- Do not store paper or cardboard in cold room.

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