YCM Microbiology Research Center
From Atomistic to Holistic
Empower Micro Compostition to Make Marco Sequel

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Suspected mold contamination on textiles

I、Introduction

Textile materials are often used to make products such as clothing or backpacks. In order to customize products to achieve different styles, the product manufacturing process includes many varied steps, such as color enhancers, dyeing, auxiliaries printing, water-repellent agent usage or relevant chemical treatments. Some chemicals can produce physical or chemical reactions when stimulated by ambient temperature, humidity or other factors, and cause visible stains on products, including the formation of granular or powdery crystals.

If textile products are not strictly controlled during storage or transportation, the chemicals used in the products may thus be affected and react, including this emergence of crystals. Some of these crystals are white in color and powdery, which can look very similar to mold if observed in plain sight. For that reason, some members of the supply chain will often reject or destroy products, passing them as moldy items. Such incidents may continue to produce losses and increase the carbon emissions from additional manufacturing without understanding the actual cause.

In response to such cases – For a suspected mold case that is difficult to identify in plain sight, YCM Microbiology Research Center (MRC) has an ISO-certified technical service. This service is named Mold Characteristic Analysis (MCA), which helps clarify whether the problem is caused by mold contamination and can be used as a reference for subsequent product disposal or attribution of liability. Recently, the textile products of Brand N have been suspected of being moldy, so they sought the assistance of YCM to find out whether their products were contaminated by mold.

II、Results and discussion

Both textiles submitted by Brand N have suspected mold contamination. After the YCM MRC inspected the samples through the ISO-certified method, it was observed that the contamination of the first textile was indeed a moldy spot caused by mold growth (Fig. a1), while the second one was determined to not have any mold growth associated on the observed stain (Fig. b1).

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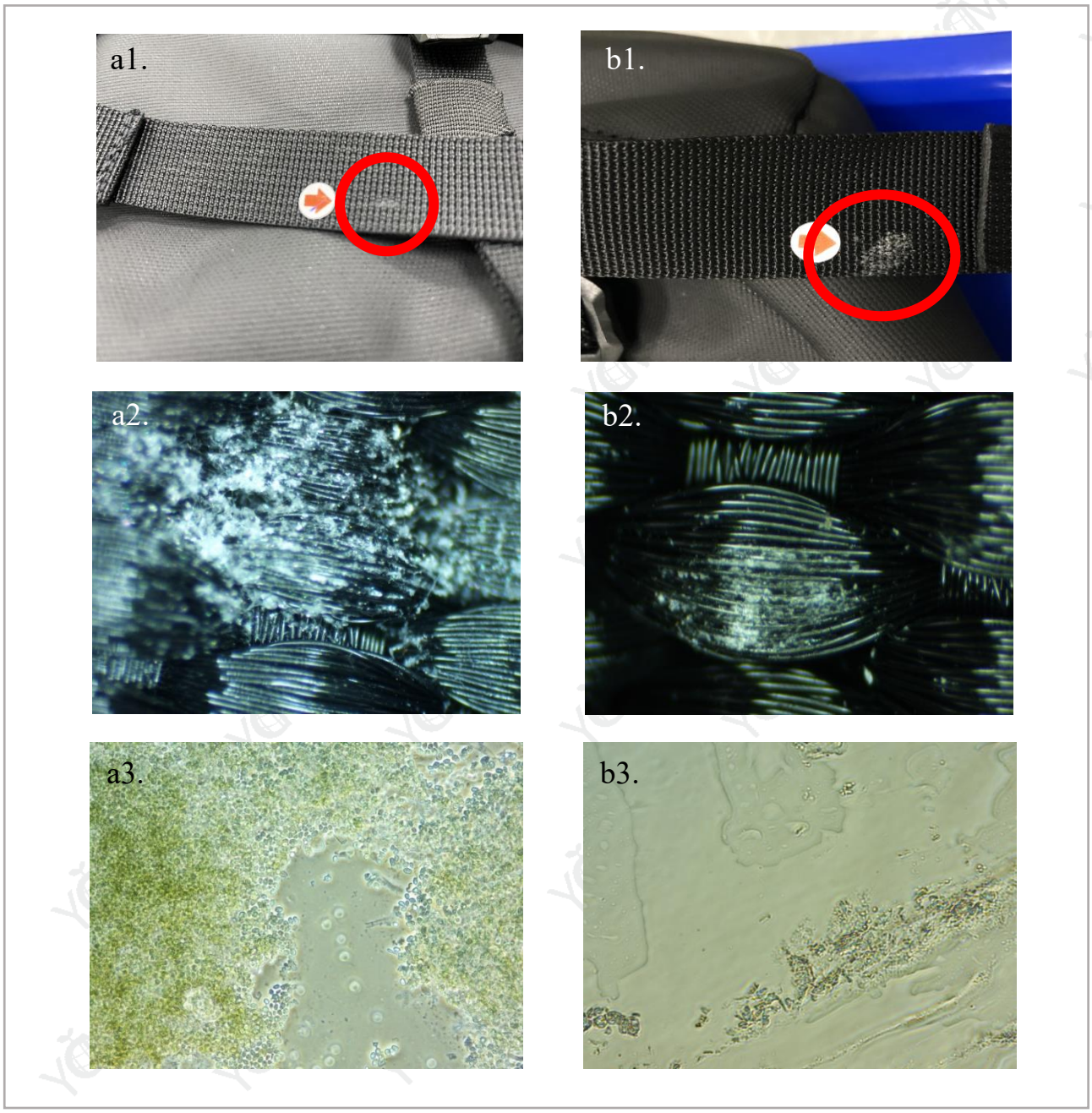

Figure 1. Brand N's textiles have suspected moldy contamination

a1 – a3. Mold growth was observed on the first textile; b1 – b3. No mold growth was observed on the second textile.

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III、Conclusion

MCA service of YCM MRC is ISO-certified and determines whether an item is moldy based on the observation and inspection of mold growth structures.

In this case, entrusted by Brand N, the suspected moldy contamination on both textiles showed white powdery spots in plain sight. YCM MRC uses professional inspection technology to analyze whether the contamination on both textiles is caused by mold, or not.

The result showed that the first sample observed had presence of mold growth structures, such as spores and hyphae, and thus was determined to be moldy; the second had no mold detected and was confirmed to be a formation of chemical crystal. In the summary meeting with Brand N, YCM MRC clarifies the difference between mold and different crystallizations. In consequence, Brand N fundamentally saves about USD 1 million in product reproduction costs and about 30 to 50 tons of carbon emissions from repeated manufacturing processes, effectively reducing waste of resources and preventing loss of value.

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