

## Case study of a textile product's potential mold risk assessment

### I · Introduction

A large part of the products' mold risk comes from the production environment. If there is a certain concentration of mold spores in the environment, the product may be affected during the production process. When there is a high concentration of mold spores in the production environment, it means that a large number of mold spores will be located on the surface of raw materials or finished products. Under the right environmental conditions, mold spores will begin to germinate and cause the products to get moldy. Put an end to it, YCM Microbiology Research Center has developed a new technology that can quickly understand the potential mold risk of raw materials or finished products, eliminating concealed mold concerns.

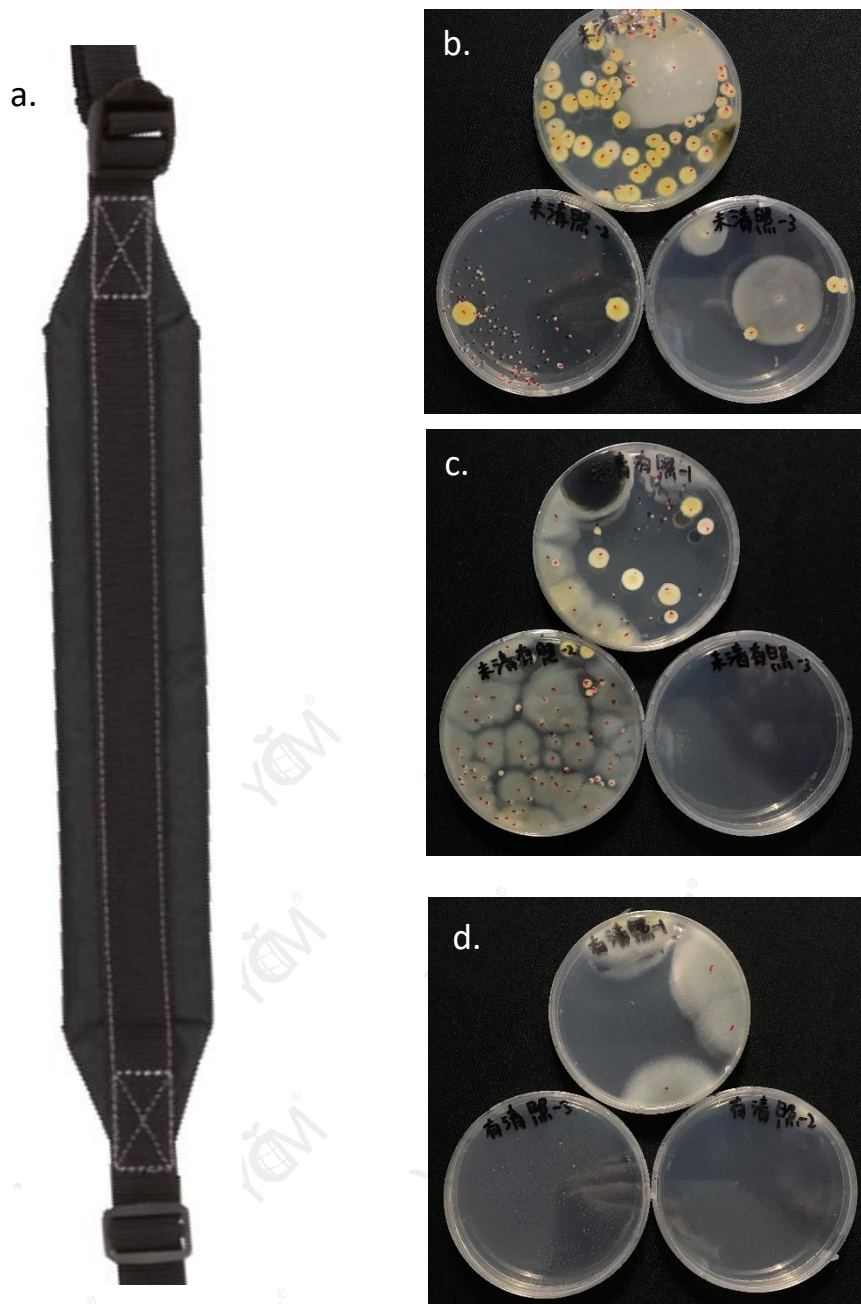
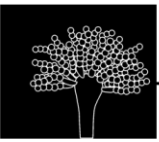
In order to stabilize product quality and reduce the risk of mold in the upcoming transportation process, Brand

V has set up three different procedures for cleaning textile products. Therefore, Brand V sought further cooperation with YCM to analyze the potential mold risk of textile products after cleaning, and to find out the most suitable cleaning process for the textile products.

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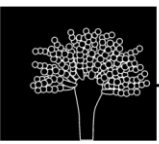
### II · Results and discussion

The main cleaning procedures of Brand V for textile products are: use of alcohol, regular wiping and UV lamp irradiation. According to the results of the colony after the test and culture, the textile products of Brand V still have a high potential mold risk under the implementation of the first and second cleaning procedures, while under the third cleaning procedure, the mold risk of the products is significantly reduced, becoming a low potential mold risk, as shown in Fig 1.



**Fig 1. Results of potential mold risk of textile products cleaned by different procedures**

a. Brand V textile product (schematic); b. Brand V's first cleaning procedure; c. Brand V's second cleaning procedure; d. Brand V's third cleaning procedure.



### III 、 Conclusion

YCM Microbiology Research Center has developed a potential mold risk assessment technology through combining big data and a series of pilot studies. According to professional research and analysis, the potential mold risk of a batch of materials or finished products can be known in a short period of time. This technology can help customers to prevent or clarify the responsibility for mold risk before the raw materials are put into production or the finished products are packaged and shipped.

In the cooperative research with Brand V, our potential mold risk assessment technology is used to quickly understand the potential mold risk of a same batch of textile products after three

different cleaning procedures. The results show that the textile products still have diverse microbial residues after being cleaned by the first or second procedures, and the products still have a high mold risk, while the third cleaning procedure has the lowest number of microbial residues and a low mold risk.

The research results not only help Brand V to clarify the most suitable and effective cleaning procedure, so that its textile products can be freed from the mold risk in the subsequent storage and transportation environments, to its possible best, but also add a successful case to our new technology "Potential Mold Risk Assessment".