

Case study of moldy metal products

I、Introduction

There seems to be a prevailing understanding that certain materials, such as metal or glass, cannot be affected by mold, but that is not always the case. Whether it is textiles, leather, wood, or even metal or glass, if the three basic growth conditions for mold are met, namely humidity, temperature and nutrient source, mold may start to breed. Mold spores are small and exist everywhere. Regardless of the differences in the humidity and temperature preferred by different molds, even a small amount of nutrients may promote the explosive growth of mold. Although metal or glass itself cannot be used as a nutrient source for most molds, the grease, dirt, or dust adhering to the surface all contain rich nutrients suitable for mold to feed off. In this case, if the ambient temperature and humidity are

suitable, the mold spores attached to the metal can easily grow, thus causing mold.

Recently, the YCM Microbiology Research Center (MRC) received a rare case of mold in which the metal products of Brand P were moldy. In the follow-up, YCM researchers conducted in-depth inspections and comparisons with YCM's database to find out the cause and the mold-causing species, to solve the mold pain points of Brand P.

II、Result

The metal products of Brand P sent for testing were suspected to be suffering of a mold phenomenon after primary observation. After testing by the YCM MRC, it was determined that it was indeed caused by the growth of mold (Fig. 1).

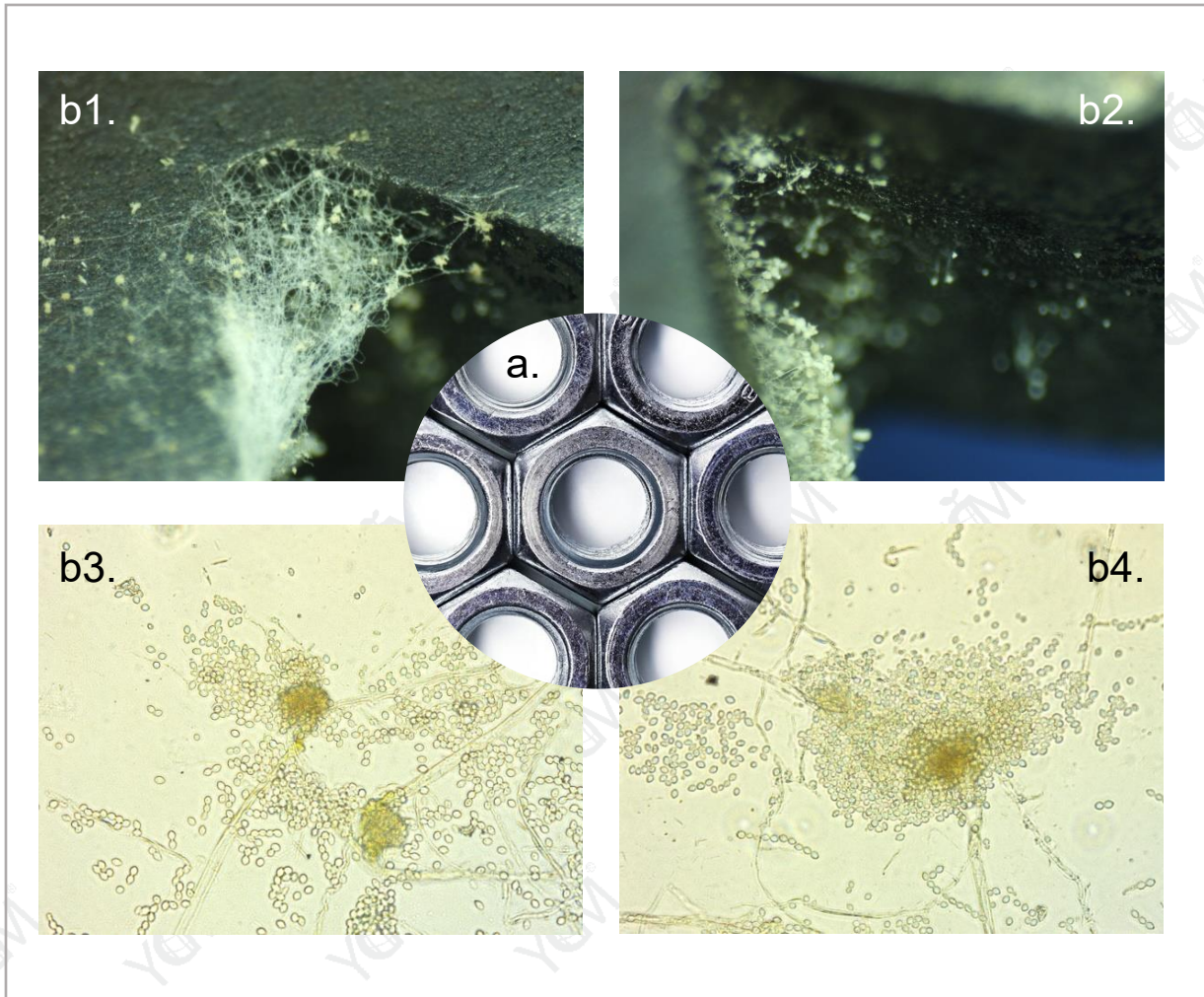
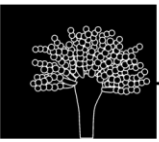
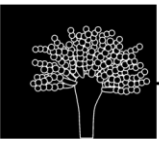


Fig 1. Metal products sent by Brand P for Inspection

a. Schematic diagram of the moldy metal (the picture is not the product of Brand P) ; b1 – b4. Metal products were observed under a microscope at different magnifications of 75X and 400X, and mold was detected.



III - Conclusion

In the rare metal mildew case of Brand P, after the detection and analysis by the YCM MRC, it was observed that a large quantity of mold grew on the surface of the sample, which means that the surface of its metal products is rich in mold nutrient sources. This nutrient source may derive from the maintenance oil applied to the product before leaving the factory to avoid oxidation. Another possible origin might be the dust attached to the product's surface during the production process. Although it is

only a limited source of nutrients, it has the potential to become a promoter of mold.

For mold cases of metal products, mold nutrient sources and mold spores are factors that cannot be fully controlled. Therefore, YCM MRC provides a simple but very effective preventive strategy to inhibit the growth of mold when under this type of condition. Allow YCM to become a strong ally to put an end to your moldy products.