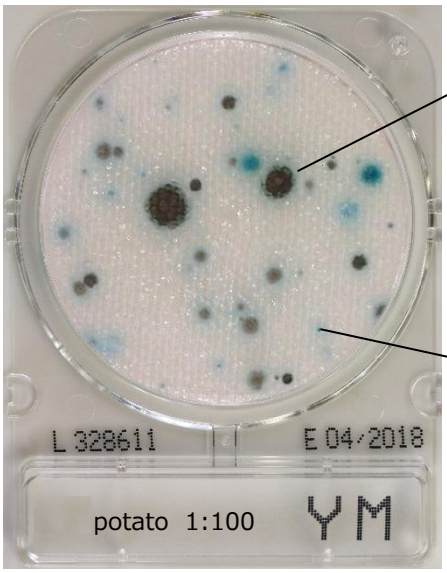
CompactDry™ YM/YMR Interpretation Guide



CompactDry YM
YM : Yeast & Mold
Certification : AOAC-PTM, MicroVal, NordVal

CompactDry YMR
YMR : Yeast & Mold, Rapid
Certification : AOAC-PTM, MicroVal, NordVal, Afnor

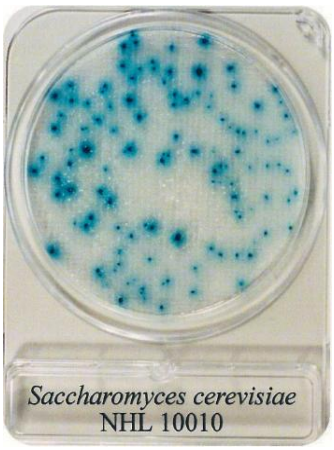
[Features]
Yeasts form green to blue colonies or white to cream-colored colonies, while molds form cottony colonies with characteristic pigmentation of the mold itself.

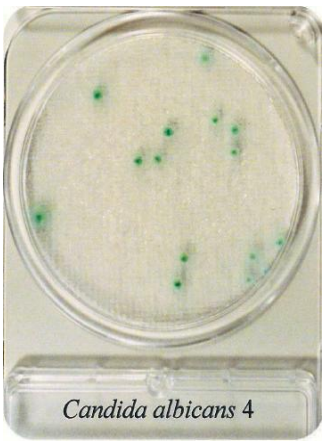
[Interpretation]
YM: 25 ± 1°C, 3 - 7 days
YMR: 25 ± 1°C, 3 days (72 ± 3 hours)

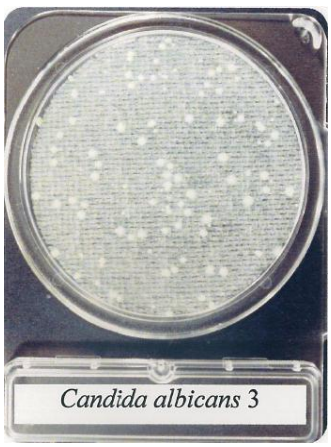
Note: Although the incubation time is different between YM and YMR, the interpretation is the same. Therefore, please refer to this interpretation guide for both products.

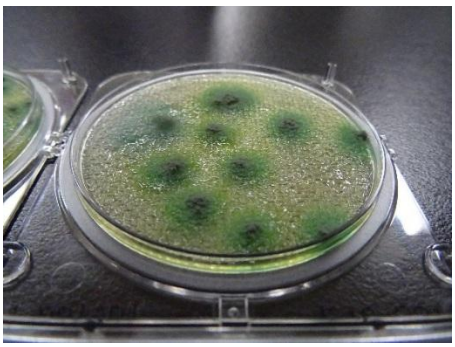
Mold and Yeast Colonies
(Examples of Pure Culture Inoculation)

→
Yeasts form round colonies with relatively well-defined margins. The colonies themselves or the surrounding medium turn blue to green due to the chromogenic enzyme substrate X-Phos. Some yeasts do not develop color, so care should be taken. Observing the plate against a black background makes white colonies easier to see.

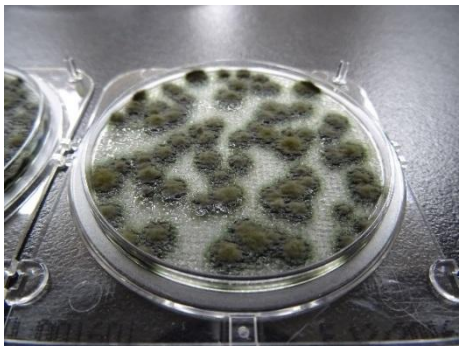








Penicillium sp. 7days incubation

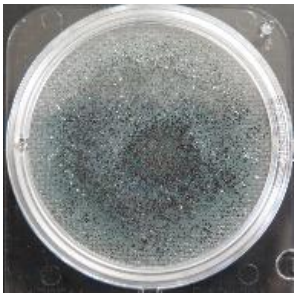


Cladosporium sp. 7days incubation

←
As shown in the potato 1:100 image, molds form large, spreading colonies with the characteristic color of the mold itself, which may also be stained blue by the chromogenic substrate. After approximately 3 days of incubation, mold spores can be observed three-dimensionally with the naked eye. After 5 to 7 days of incubation, molds develop characteristic colony morphology.

When molds form giant colonies on CompactDry™, the spore morphology and coloration characteristic of the mold species can be observed.→

Note: Mold spores may be dispersed when the lid of the CompactDry™ plate is opened. Therefore, observe the plate without opening the lid.If it is necessary to open the lid, observe the plate only after taking appropriate biosafety precautions, such as performing the operation in a biological safety cabinet.



Formation of Giant Colonies



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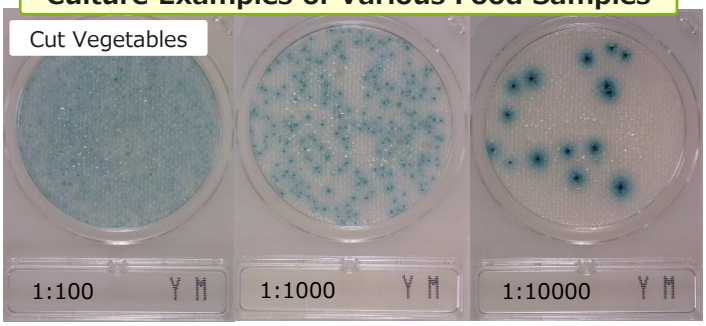
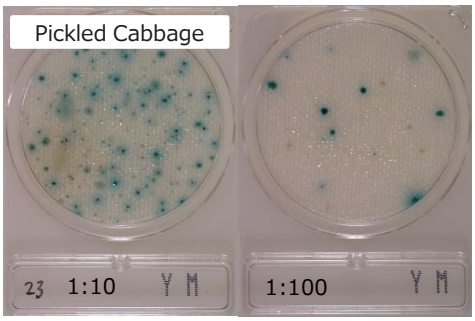
CompactDry™ International Certifications Approved.

Culture Examples of Various Food Samples





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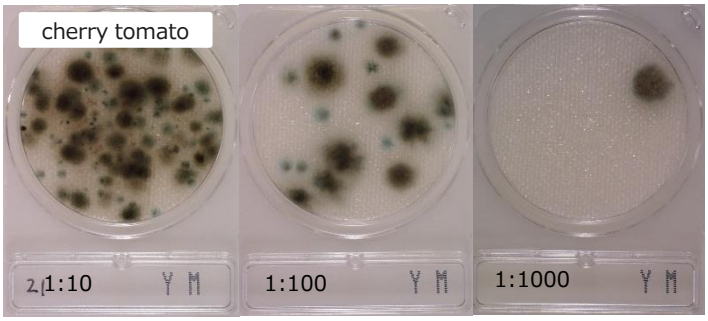
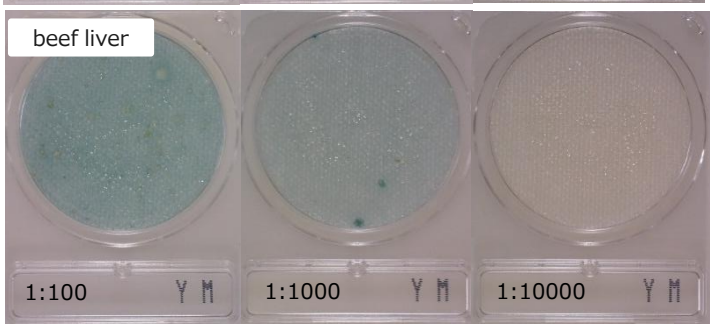
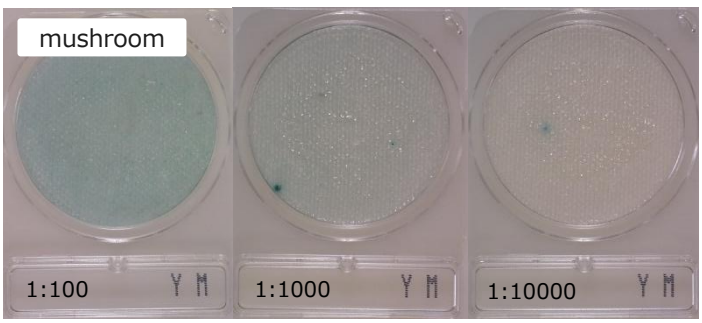
In the cut vegetable and pickled cabbage, yeasts are predominantly detected, and non-colored yeasts can be observed in pickled cabbage.

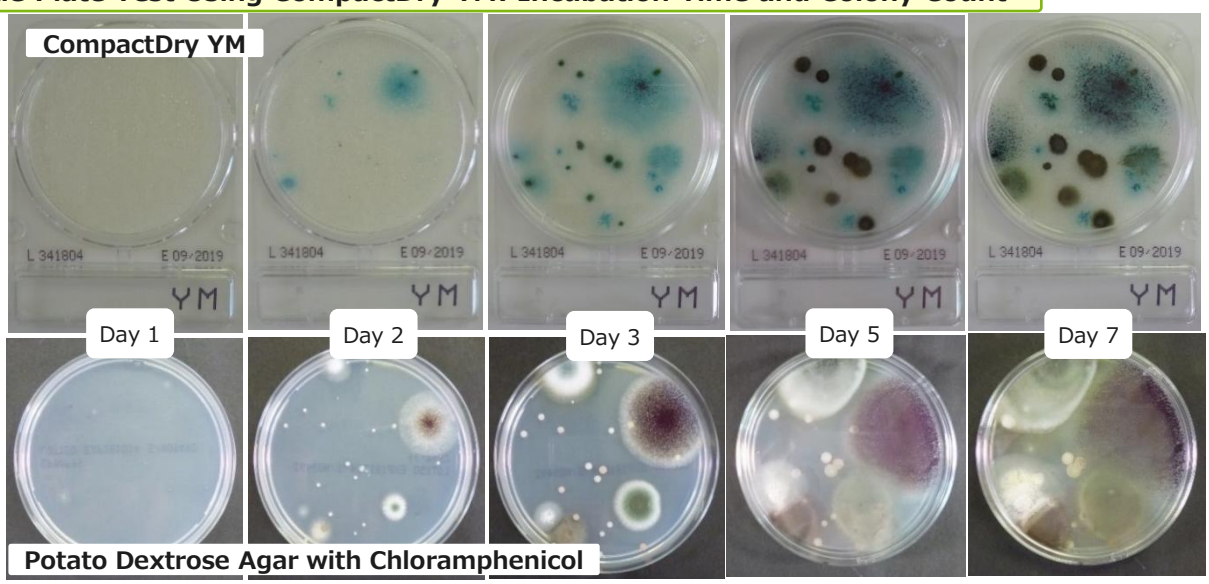


←In the cherry tomato sample, two types of molds can be observed: black molds and molds that appear blue due to the chromogenic enzyme substrate.
↓In the beef liver and mushroom samples, faint coloration was observed over the entire medium sheet. Such overall coloration may be caused by a high number of microorganisms inoculated onto the plate or by reactions between the food sample itself and the chromogenic substrate. In such cases, the cause can be identified by observing colony counts at the preceding and subsequent dilution levels. Please note that some animal organs and vegetable materials may react with the chromogenic substrate. In both the beef liver and mushroom samples, relatively intensely colored colonies can be observed within the faintly colored background.





Settle Plate Test Using CompactDry YM: Incubation Time and Colony Count



CompactDry™ YM and potato dextrose agar with chloramphenicol(90 mm petri dish) were exposed at the same location for a fixed period and then incubated. Colony development was observed over time, and a high correlation was obtained between the colony counts by the two methods.
When comparing the results, multiply the colony count obtained with CompactDry™ by 3.24 based on the surface area ratio between CompactDry™ and a 90 mm Petri dish (19.6/63.6 = 1/3.24).
After 7 days of incubation, mold colonies may spread and become difficult to count. Therefore, it is recommended that colony counts be recorded on the backside of the plate with an oil-based marker or similar at Day 3, and that the final interpretation be made after 7 days of incubation.

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