

Test Kit for Yeast and Mold in Food and Beverage

Target Sample

- Ready-to-eat food
- Beverage in tightly sealed containers

Number of Tests / Kit
5 Tests

Test Kit Tool



- 3 M Petrifilm™ test mold 1 sachet(5 sheets)
- Reagent 1 and 2 5 bottles for each
- Sterile plastic bags
- Sterile syringe 10 pieces
- Plastic plate for spreading sample 1 pieces
- Cotton balls with alcohol 1 bags
- Disinfectant
- Test kit manual

sheet for yeast and

5 bags

1 bottle
1 sheet

Other necessary tool (not included in the kit box)

- Stainless tablespoon
- Scissors
- Lighter or alcohol burner
- Balance with 1 gram scale (if available)

Sample type and test procedure

1. Food : Ready-to-eat food must follow all steps except the step 2.(For step 5 and 7, follow according to the sample type)
2. Liquid beverage : Follow step 1,2 and then move to step 10,11,12
3. Dried beverage : 3.1 Beverage with ingredients of parts of the trees, e.g. leaf, stem, flower etc.
3.2 Powder or granule beverage

For both dried beverage, follow steps 1,3,4-7 and then move to steps 10,11,12 (For step 5 and 7, follow according to sample type)

Procedure

1. Examiner uses cotton ball with alcohol rub both hands and the opening area of food container.



2. For liquid beverage, vigorously shake the sample container at least 25 times. Use a syringe draw up 1 ml. of sample. Beware not to contact the bottom part of syringe before drawing up.





3. For food sample, use cotton ball with alcohol
rub the cutting part of scissors and flame it
with
lighter. Hold the scissors for a moment to
cool
down and cut the sample container. Then cut
the
food sample to be small pieces. (Do not lay
down the scissors on the table before cutting)

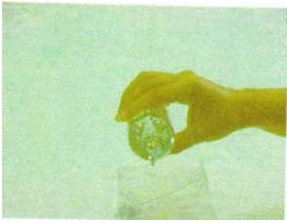
4. Use the cotton ball soaked with alcohol rub at
the end of a tablespoon and flame with lighter.
Hold the spoon for a moment to cool down.
(Do
not lay down the spoon).

5. Preparation of sample ; follow 5.1 or 5.2 or 5.3
depending on the sample type.

5.1 Food : Weigh 10 g of sample or get 1
tablespoon and put into a sterile plastic bag.

5.2 Dried beverage with part of tree leaves,
stem, etc : Weigh 10 g of sample or get 4
tablespoon and put into a sterile plastic bag.

5.3 Powder or granule beverage : Weigh 10 g
of sample or get 1 full tablespoon and put
into a sterile plastic bag.



6. Pour 1 bottle of Reagent 1 in the bag and close tightly. Vigorously shake the bag for at least 25 times.



7. Perform the followings according to sample type.
 - Food sample : Use a syringe draw up 0.2 ml of the solution from item 6.
 - Dried beverage : Use a syringe draw up 1 ml of the solution from item 6.



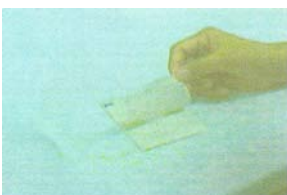
8. Inject all solution into Reagent 2 bottle. Tightly close the bottle and vigorously shake for at least 25 times.



9. Use a new syringe draw up 1 ml of the solution from item 8.

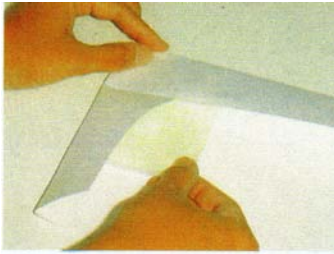


10. Slowly lift the top film of Petrifilm 3M test sheet and inject all solution on the middle of the sheet.]
Slowly close the top film. Beware of making bubble while closing.





11. Cover the sample area on the sheet with a plastic plate for spreading and slowly push center of the plate to spread the sample.



12. Keep the sheet in dark place at room temperature (20-32°C) (or keep in the air-conditioned room)

for 3 days and observe the result.

Evaluation

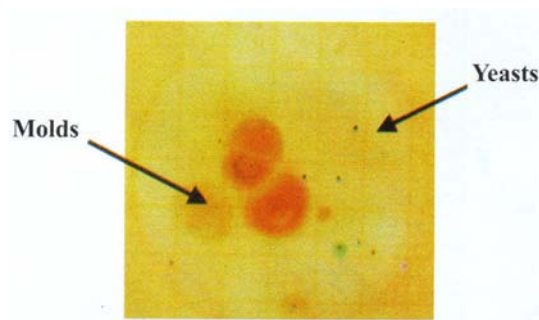
-Characteristic of yeast
blue-green or pink-tan

defined edges.

-Characteristic of mold colony :

focus in center

black,pink,green etc.)



colony : small

colonies with

-Large flat colonies with diffuse edges

-Usually colony has a

- Variable color (eg.

Count number of yeast and/or mold colonies on the sheet and interpret the result as the following table.

√ Type of Sample =	Number of Yeast colonies	Number of Mold Colonies	Interpretation	Yeast and mold count In 1 g of sample
Beverage	0 1 or more	0 1 or more	√ ×	Number of colonies counted
Ready to Eat food	0 – 19 More than 19	0 01 or more Than 1	√ ×	Number of Colonies x 500
pass (good quality) × = not pass (poor quality)				

Food regulations/ guidelines

1. Food: Guidelines for ready-to-eat food of Department of Medical

Sciences, Ministry of Public Health, Thailand, defines that Yeasts/g must be less than 10,000 and Molds/g must be less than 500.

2. Beverage in tightly sealed containers :

Food regulation of the Ministry of Public Health, issue number 214 (2000 B.C.) defines that yeasts and molds in food must be absent.

Procedure After test

Put after used 3M Petrifilm™ sheet in a plastic bag containing disinfectant to destroy microbes on the sheet. Close the bag and throw in garbage.