SimPlate® *Yeast and Mold*

Introduction

SimPlate® for Yeast and Mold (YM) method is used for the detection and quantification of yeast and mold in foods. The medium/sample mixture is dispensed into a SimPlate® device and incubated. The total yeast and mold count is determined by counting the fluorescent wells and referring to the SimPlate® Conversion table. The SimPlate® device is packaged separately.

Single Test Medium

Kit Components

100 individually-packaged dehydrated YM medium containers.

A. Sample Preparation

a. Weigh 50 g of sample into a 450 mL of sterile diluent [0.1% peptone water (FDA BAM Method) or peptone salt solution (ISO Method)] for a 10-fold dilution.

b. If an alternate sample size is specified in your testing procedure or standard, prepare a 10% weight to volume suspension.

c. If necessary, prepare 10-fold serial dilutions appropriate for the anticipated population of the sample.

B. Test Procedure

For 1.0 mL sample size

a. Resuspend powdered medium with 9.0 mL of sterile deionized water containing 1 mL of Supplement A per 100 mL. Add 1.0 mL of sample and mix well. DO NOT count this reconstitution as a dilution.

For 0.1 mL sample size

b. Resuspend powdered medium with 9.9 mL of sterile deionized water containing 1 mL of Supplement A per 100 mL. Add 0.1 mL of sample and mix well. This is an additional 10-fold dilution.

Note: The final volume of sample/medium mixture in the container should be 10 ±0.2 mL.

c. Remove the lid from the SimPlate® device and pour the sample/ medium mixture onto the center of the plate (Figure 1). Immediately replace the lid.

Multiple Test Medium

Kit Components

50 multi-test dehydrated YM medium containers. Each container is sufficient for 10 tests.

A. Sample Preparation

a. Weigh 50 g of sample into a 450 mL of sterile diluent [0.1% peptone water (FDA BAM Method) or peptone salt solution (ISO Method)] for a 10-fold dilution.

b. If an alternate sample size is specified in your testing procedure or standard, prepare a 10% weight to volume suspension.

c. If necessary, prepare 10-fold serial dilutions appropriate for the anticipated population of the sample.

B. Test Procedure

a. Empty contents of one container into 100 mL of sterile deionized water containing 1 mL of Supplement A per 100 mL. Shake to completely dissolve.

b. Remove the lid from the SimPlate® device. If prepared sample size is 1.0 mL, pipette it onto the center of the device (Figure 2). Overlay the sample with 9.0 mL of medium. DO NOT count this medium addition as a dilution.

c. For 0.1 mL of prepared sample, overlay it with 9.9 mL of medium. This is an additional 10-fold dilution.

Note: The final volume of sample/medium mixture on the plate should be 10 ±0.2 mL. Immediately replace the lid.

d. Gently swirl to distribute the sample/medium mixture into all the wells (Figure 3). The plate may be held with both hands and tilted slightly to help distribute the liquid into the wells.

e. Pour off excess medium by holding the lid against the plate on either side of the sponge cavity. Tip the plate toward you to allow liquid to drain into the sponge (Figure 4). DO NOT be concerned if partially filled wells are present. Wells containing partial volume of liquid will turn positive in the presence of viable fungi.

f. DO NOT invert the SimPlate® device. Incubate in the dark at 30 °C for 48 ±2 h or at 25 °C for 72 ±2 h.

Figure 1

For single test, pour sample/medium mixture onto the center of the plate.

Figure 2

For multiple tests, pipet sample onto center of plate. Add rehydrated medium to make a final volume of 10 ±0.2 mL.

Figure 3

Cover plate, gently swirl to distribute the sample into all of the wells.

Figure 4

Holding the cover, tip the plate toward you to allow liquid to drain.

C. Reading and Interpretation of Results

a. After incubation, count the number of wells showing blue fluorescence by holding a UV light (366 nm) approximately 15–30 cm (6–12 in) above the SimPlate® device.

b. To determine the population, perform the following calculations:

1. Count the number of positive (blue fluorescent) wells on the plate.
2. Use the SimPlate® Conversion Table to determine the total number of fungi per plate.

c. To calculate the number of **fungi per g (mL),** multiply the count in **C(b)**(2) by the appropriate dilution factor (see sections **A** and **B**).

D. Product and Storage Information

a. Store dehydrated medium away from direct light at 2–30 °C.

b. DO NOT use expired medium.

c. Store containers of reconstituted medium between 15 and 25 °C and use within 12 h.

d. Handle and dispose of incubated medium in a decontamination container and sterilize according to Good Laboratory Practices.

Manufacturing Entity

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