Millipore®

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Instruction Manual

MC-Media Pad® Yeast & Mold

Convenient culture media for the enumeration of yeasts & molds

Yeast and Mold

Application

For hygiene control, it is important to determine the microbial count in food and beverage products. MC-Media Pad® Yeast & Mold serves to enumerate viable yeasts and molds in foods thanks to the medium's special composition and a unique redox indicator.

The MC-Media Pad® is a pre-sterilized, ready-to-use dry culture device that simplifies testing and minimizes waste. It is composed of a unique adhesive sheet, a test pad coated with medium, a water absorption polymer, and a transparent cover film.

The method can also be used for the quantification of yeasts and molds in dried cannabis flower containing delta-9 tetrahydrocannabinol (THC) >0.3%.

Test Principles

The MC-Media Pad® is coated with a growth medium and a redox indicator for detection. Once the liquid sample is inoculated onto the test pad, the sample diffuses through the whole pad by capillary action.

The medium re-constitutes automatically. If target organisms are present, they grow as red colored colonies on the test pad. The yeast and mold count is determined by counting the red colored colonies.

Certification

AOAC® Official Method of Analysis℠, number 2018.02
AOAC® Performance Tested Method℠, Cer. No. 111401

MC-Media Pad® Yeast & Mold was found to be suitable for the enumeration of yeasts and molds in chicken nuggets and yogurt (a_w >0.95), dry pet food, orange juice concentrate, cake mix (a_w <0.95), and dried cannabis flower (THC >0.3%).

MicroVal, Cer. No. 2015LR51

MC-Media Pad® Yeast & Mold is approved as an alternative method to EN ISO 21527-1:2008. Validation and certification were performed in accordance with EN ISO 16140-2:2016 for all foods with an a_w >0.95.

Contents and Storage

100 pads (4 x 25 pads); Cat. No. 1323600001
This kit should be stored at 2 to 15 °C (refrigerated).

Materials required but not provided

- Incubator (25 ±1 °C)
- Homogenizer or blender (e.g. Cat. No. 5.42765.0001)
- Sampling bag (recommended for homogenizer; bag with filter to eliminate food debris)
- Pipette or pipettor and pipette tips
- 0.1% peptone water or appropriate diluents according to EN ISO 6887

Sample Preparation

For solid food samples

Homogenize the test sample (25 g or 50 g) with the 9-fold volume of appropriate diluent (e.g. 0.1% peptone water, Butterfield's 0.1% peptone water, saline or water) with a homogenizer. If necessary, make a 10-fold serial dilution.

AOAC-validated method for food samples: Homogenize 25 g of test sample with 225 mL of 0.1% peptone water.

For liquid samples

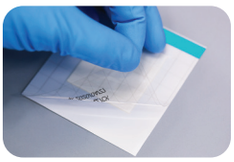
Sample can be applied directly. If necessary, the pH of the sample should be initially adjusted to neutral (pH 7.0 ±0.2).

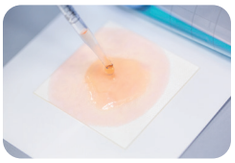
For dried cannabis flowers

Homogenize 10 g of test sample with 90 mL of 0.1% peptone water. If necessary, make a 10-fold serial dilution.

Test Procedure

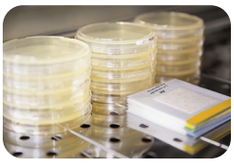
1. Open the aluminum bag and remove a MC-Media Pad®. If necessary, write information on the cover film.
2. Lift the transparent cover film and pipette 1.0 mL of sample solution onto test pad. It is recommended to lift the cover film diagonally for easy and secure re-sealing.





3. Close the cover film and lightly press the edges of the film to seal.

4. Incubate test plate at 25 ±1 °C for 48–72 hours. MicroVal-validated method: incubate plates for 72 hours. For dried cannabis flower, test plates must also be incubated for the full 72 hours prior to interpretation.



5. Re-seal the opened bags and store at 2–15 °C for up to 4 weeks.

Interpretation

Count all reddish colored colonies. Yeasts will appear as circular reddish colored colonies. Molds will appear as diffuse and fuzzy outlined, reddish colored colonies. The specific color of mold spores may overlap the reddish colored colonies. To assist with counting, a colony counter device or other magnifier light source can be used.

The measurement range is up to 300 cfu/pad. If only mold colonies are present on the pad, the measurement range is up to 200 cfu/pad. If more than 300 cfu/pad are counted (200 cfu for molds), further dilution is recommended.

If a large number of colonies makes counting difficult, the colony count can be estimated by counting the colonies in only one grid square and multiplying the count by 20.

If more than 10^4 microbes grow, the entire test pad may appear stained, and it may seem that no individual colonies were formed. If this occurs, dilute the sample further and test again. If necessary, a target colony can be picked up from the test pad with a sterile needle for further analysis.

The nature of the food sample (high viscosity or presence of food dye) may affect test usage or results. In such cases, the causes need to be eliminated by dilution or other means.

A wrinkle on the test pad should not affect detection, neither should small fragments of fabric on or around the test pad.

Precautions

Safety precautions

- This product is not intended for human or veterinary use. MC-Media Pad® Yeast & Mold must be used as described in the package insert.
- Retain the safety instructions for future reference. The user should read, understand, and follow all safety instructions for the MC-Media Pad® Yeast & Mold kit.
- Contents of the test may be harmful if swallowed or otherwise taken up.
- To reduce the risks associated with exposure to chemicals and biohazards, perform testing in a properly equipped laboratory under the control of trained personnel.
- Sample dilutions and incubated Media Pads from matrix can contain pathogenic fungi if the particular test portion was contaminated.
- All sample dilutions, used devices, and incubated materials should be sterilized by autoclaving or boiling and properly disposed of. Decontaminate and dispose of materials in accordance with good laboratory practices and in accordance with all applicable local, state, and federal regulations.
- Wear appropriate protective equipment which includes, but is not limited to: protective eyewear, face shield, clothing/laboratory coat, and gloves. All work should be conducted in properly equipped facilities utilizing appropriate safety equipment (for example, physical containment devices).
- Staff should be trained in accordance with the applicable regulatory and company/institution requirements before working with potentially infectious materials. Use standard aseptic microbiological laboratory techniques, including the decontamination of any spills using disinfectant.
- Clean the workstation and lab equipment with an appropriate disinfectant before and after use (sodium hypochlorite solution, phenol solution, quaternary ammonium solution, etc.).

General precautions

- The test is designed for use by quality control personnel and other staff familiar with testing samples potentially contaminated with aerobic microbes.
- Read this instruction manual carefully before use.
- After opening the aluminum bag, unused pads should be stored within the bag, sealed with tape and kept in a cool (2–15 °C) environment. After opening the first time, use the remaining pads within four weeks.
- Do not expose unused pads to sunlight or ultraviolet light.
- Do not use a discolored or damaged pad.
- Do not use the pads after the expiration date. The quality of an expired pad is not guaranteed.

To place an order or receive technical assistance

Contact our Technical Services: **SigmaAldrich.com/techservice**

For more information, please visit **SigmaAldrich.com**,
go to the support tab for up-to-date worldwide contact information

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