TECHNICAL DATA SHEET

SYMPHONY AGAR

ENUMERATION OF YEASTS & MOLDS

1 INTENDED USE

Symphony agar allows the enumeration of yeasts and molds in all human and animal food products regardless of their water activity. It can also be used for the control of environmental samples in production areas. In the case of water samples, they can be analyzed by membrane filtration using this media.

The **SYMPHONY agar** is certified by NF VALIDATION for the enumeration of yeasts and molds in all human and animal food products under the reference number BKR 23/11-12/18, of which the validity runs until 4th December 2022.
This method allows the enumeration after only 54 hours instead of 5 days with standard methods NF ISO 21527-1 and NF ISO 21527-2.

BKR 23/11-12/18,
ALTERNATIVE ANALYSIS METHOD
FOR AGRIBUSINESS
Certified by AFNOR Certification **nf-validation.afnor.org/en**

2 PRINCIPLES

The choice of peptones, carbohydrates and growth promotors were specially selected in order to optimize the rapid growth of yeasts & molds.
Rose Bengal is assimilated by yeasts which facilitate their enumeration by coloring them pink.
The selective system, associated with the pH of the media, insures the inhibition of the majority of bacterial contaminants.
The media has been conceived in a way that reduces the propagation of Mucor thallus, which facilitates their count after only 54 hours of incubation. It is also well adapted to the enumeration of mold spores.

3 TYPICAL COMPOSITION

The composition can be adjusted in order to obtain optimal performance.

For 1 liter of media :

- Peptones ..... 10,0 g
- Glucose ..... 18,0 g
- Growth promotors ..... 1,0 g
- Selective system ..... 1,0 g
- Bacteriological agar..... 15,5 g

pH of the read-to-use media at 25 °C : 5,6 ± 0,2.

4 PREPARATION

Preparation of dehydrated medium :

- Suspend 45.5 g of dehydrated medium (BK227) in 1 L of distilled or deionized water.
- Slowly bring to boiling, stirring with constant agitation until complete dissolution.
- Dispense in flasks.
- Sterilize in an autoclave at 121 °C for 15 minutes.
- Cool and maintain at 44-47°C.

✓ **Reconstitution : 45.5 g/L**

✓ **Sterilization : 15 min at 121 °C**

NOTE : Avoid excessive heating of medium, which will produce a denaturation of agar due to an acidification of pH and a very soft agar medium.

Use of ready-to-melt base medium :

- Melt the ready-to-melt medium (BM191) for the least amount of time needed to achieve total liquefaction.
- Cool and maintain the media in a molten state at 44-47 °C.

5 INSTRUCTIONS FOR USE

Surface inoculation

- Pour into sterile Petri plates.
- Let solidify on a cold, flat surface.
- Dry the plates in an incubator, covers partially removed.
- Transfer 0,1 mL of the sample to be tested and its serial dilutions to the surface of the prepared plates.
- To estimate low numbers, inoculate 1 mL of initial suspension on to the surface of 3 Petri dishes (Ø 90 mm).
- Spread the inoculum over the surface of the plate with a sterile triangle or “hockey stick”.
- Incubate the plates with the cover facing up at 25 °C for 54 to 72 hours.

✓ **Inoculation :**
0,1 mL on the surface

✓ **Incubation :**
54 to 72 h at 25 °C

Pour plate inoculation

- Transfer 1 mL of the sample suspension and its serial dilution to empty, sterile Petri plates.
- Pour in approximately 15 mL of molten media, per plate.
- Homogenize well by swirling and let solidify on a cold, flat surface.
- Incubate the plates with the covers facing up at 25 °C for 54 to 72 hours.

✓ **Inoculation :**
1 mL in pour plates

✓ **Incubation :**
54 to 72 h at 25 °C

NOTE :
The method of surface inoculation can results in superior counts over the pour plate method. Surface inoculation facilitates the maximum exposure of the cells to atmospheric oxygen and avoids thermal inactivation of fungal propagules.

6 RESULTS

Refer to the EN ISO 7218 for the interpretation and determination of results.
Count only plates containing less than 150 colonies.

7 QUALITY CONTROL

Dehydrated media : cream powder, free-flowing and homogeneous.
Prepared media : limpid, violet agar.

Typical culture response after 3 days of incubation at 25 °C :

Microorganisms		Growth (Productivity ratio : P_R)
Saccharomyces cerevisiae	WDCM 00058	$P_R \geq 50$ %
Candida albicans	WDCM 00054	$P_R \geq 50$ %
Aspergillus brasiliensis	WDCM 00053	$P_R \geq 50$ %
Escherichia coli	WDCM 00013	Inhibited, score 0
Bacillus subtilis ssp. *spizizenii*	WDCM 00003	Inhibited, score 0

8 STORAGE / SHELF LIFE

Dehydrated medium : 2-30 °C
Ready-to-melt media : 2-8 °C.
Pre-poured medium : 2-8 °C.
The expiration date are indicated on the labels.

Prepared medium in vials (*)**:** 180 days at 2-8 °C.
Prepared medium in plates (*)**:** 30 days at 2-8 °C.
(*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

9 PACKAGING

Dehydrated medium :
500 g vial..... BK227HA

Ready-to-melt media :
10 x 200 mL vials BM19108

Pre-poured media :
20 plates (Ø 90 mm) BM20208

10 BIBLIOGRAPHY

NF ISO 21527-1. Novembre 2008. Microbiologie des aliments. Méthode horizontale pour le dénombrement des levures et des moisissures. Partie 1 : Technique par comptage des colonies dans les produits à activité d'eau supérieure à 0,95.

NF ISO 21527-2. Novembre 2008. Microbiologie des Aliments. Méthode horizontale pour le dénombrement des levures et des moisissures. Partie 2 : Technique par comptage des colonies dans les produits à activité d'eau inférieure ou égale à 0,95.

NF V08-059. Novembre 2002. Microbiologie des aliments. Dénombrement des levures et moisissures par comptage des colonies à 25°C. Méthode de routine.

NF V 08-036. Mai 2003. Microbiologie des aliments. Méthode horizontale pour le dénombrement des levures et moisissures se développant sur un milieu à faible a_w.

ISO 6611. 2004. IDF 94:2004. Lait et produits laitiers - Dénombrement des unités formant colonie de levures et/ou moisissures - Comptage des colonies à 25 °C.

11 ADDITIONAL INFORMATION

The information provided on the labels take precedence over the formulations or instructions described in this document and are susceptible to modification at any time, without warning.

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ANNEX 1 : PHOTO SUPPORT

SYMPHONY Agar

Enumeration of yeasts and molds