

# 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.

This formulation allows an enumeration after only 3 days incubation, as compared to a minimum of 5 days for other normalized methods.

#### 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 3 days 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.....	12 to 16,0 g

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

#### 4 PREPARATION

- 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.
- Spread the inoculum over the surface of the plate with a sterile triangle or "hockey stick".
- Incubate the plates with the cover facing up between 25 and 28 °C for 72 ± 3 hours.

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

✓ **Incubation :**  
3 days at 25-28 °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 between 25 and 28 °C for 72 ± 3 hours.

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

✓ **Incubation :**  
3 days at 25-28 °C

## NOTES :

- 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.
- To accelerate the growth and enumeration of yeasts and molds, chose an incubation temperature towards the high end of the suggested range.
- Surface inoculation also results in a faster development of molds than does the technique by pour plates.

## 6 RESULTS

Count only plates containing less than 150 colonies.

See Annex 1 : PHOTO SUPPORT

## 7 QUALITY CONTROL

**Prepared media :** limpid, violet agar.

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

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

## 8 STORAGE / SHELF LIFE

**Ready-to-melt media :** 2-8 °C.

The expiration date is indicated on the label.

**Prepared medium in plates :** 30 days at 2-8 °C.

## 9 PACKAGING

**Ready-to-melt media :**

10 x 200 mL vials ..... BM19108

## 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

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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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## SYMPHONY Agar

Enumeration of yeasts and molds

