

## TECHNICAL DATA SHEET

# SABOURAUD DEXTROSE AGAR (SDA)

### ENUMERATION OF YEASTS AND MOLDS

## 1 INTENDED USE

Sabouraud Dextrose Agar is a classical medium for the culture, isolation and identification of yeasts & molds in sterility tests of pharmaceutical and cosmetic products. It is also used in the specific detection of *Candida albicans* in pharmaceutical products.

The typical composition response to that defined in the standards NF EN ISO 18416, NF EN ISO 16212, NF EN ISO 11930 and in the European Pharmacopeia.

## 2 HISTORY

The medium was recommended by Sabouraud for the growth of pathogenic fungi in skin infections.

## 3 PRINCIPLES

Sabouraud Dextrose Agar is a peptone glucose medium enabling the growth of yeasts and molds. The acid pH inhibits the majority of secondary flora.

## 4 TYPICAL COMPOSITION

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

For 1 liter of media :

- Dextrose (\*) ..... 40,0 g
- Pancreatic digest of animal tissues ..... 5,0 g
- Pancreatic digest of casein ..... 5,0 g
- Bacteriological agar..... 15,0 g

pH of the ready-to-use media at 25 °C :  $5,6 \pm 0,2$ .

(\*) : The dehydrated media contains 26,4 g of anhydrous dextrose, which corresponds to 40,0 g of monohydrated dextrose.

## 5 PREPARATION

### Preparation from dehydrated media :

- Dissolve 61,4 g of dehydrated media (BK025) in 1 liter of distilled or demineralized water.
- Slowly bring to boiling, stirring with constant agitation until complete dissolution.
- Dispense in tubes or vials.
- Sterilize in an autoclave at 121°C for 15 minutes.
- Cool and maintain in a molten state at 44-47 °C.

✓ **Reconstitution :**  
61,4 g/L

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

### Use from ready-to-melt media :

- If the media was prepared in advance as above, or with the ready-to-melt media (BM053), melt the medium for the minimum amount of time necessary to achieve total liquefaction.
- Cool and maintain the media in a molten state at 44-47 °C and use according to the application.

**Note :**

For certain applications, the media can be supplemented with gentamicin (BS009) or chloramphenicol (BS021). Refer to the technical data sheets for the supplements concerned for more information.

## 6 INSTRUCTIONS FOR USE

### Enumeration of yeasts and molds in non-sterile products, according to the Pharmacopeia

#### Surface inoculation

- Use ready-to-use plates (BM173) or pour the media maintained in a molten state at 44-47°C into sterile Petri plates and let solidify on a cold, flat surface. .
- Dry the plates in an incubator with the covers partially removed.
- Inoculate with 0,1 mL of the test sample on the surface of the plates and spread around evenly with sterile triangle or « hockey stick ». Use of membrane filters are also possible ; deposit the membrane on the surface of the agar, filtered side up, after filtration of a cosmetic test product.

✓ **Inoculation :**  
Isolation

✓ **Incubation :**  
24 to 48 hours at 30-35 °C

#### Cosmetics, demonstration of the efficacy of a neutralizer (NF EN ISO 11930)

- Transfer 1 mL of each trial (test sample and controls) into sterile Petri plates.
- Pour over roughly 15 mL of molten media maintained at 44-47 °C, per plate.
- Mix well and let solidify on a cold, flat surface.
- Incubate at 30-35 °C for 2 to 3 days for the enumeration of *Candida albicans*.

✓ **Inoculation :**  
In pour plates, 1 mL

✓ **Incubation :**  
2 to 3 days at 30-35 °C

**Note :**

The media can be used for the enumeration of yeasts and molds in cosmetic products known to be free of contamination by bacteria according to the standard NF EN ISO 16212. In this case, inoculate in depth, on the surface or by filtration and incubate 5 to 7 days at 20-25 °C

✓ **Inoculation :**  
On the surface, in depth or via filtration

✓ **Incubation :**  
5 to 7 days at 20-25 °C

## 7 RESULTS

After incubation, observe the growth of yeasts and molds. Enumerate the plates containing less than 100 colonies or thallus.

## 8 QUALITY CONTROL

**Dehydrated media :** cream-white powder, free-flowing and homogeneous.

**Pre-poured or ready-to-melt media :** light amber agar.

Typical culture response after 48-72 hours of incubation at 20-25 °C (NF EN ISO 11133)

Microorganisms		Growth
<i>Saccharomyces cerevisiae</i>	WDCM 00058	Positive
<i>Aspergillus brasiliensis</i>	WDCM 00053	Positive

Typical culture response after 24 hours of surface incubation at à 30-35 °C

Microorganisms		Growth
<i>Candida albicans</i>	WDCM 00054	$P_R \geq 70 \%$

## 9 STORAGE / SHELF LIFE

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**Dehydrated media** : 2-30 °C.

**Ready-to-melt media in vials** : 2-25 °C.

**Pre-poured media in Petri plates** : 2-8 °C.

The expiration dates are indicated on the labels.

**Prepared media in tubes or vials (\*)** : 180 days at 2-25 °C.

**Prepared media in plates (\*)** : 30 days at 2-8 °C.

(\*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

## 10 PACKAGING

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**Dehydrated media** :

500 g bottle ..... BK025HA

**Pre-poured media in Petri plates (Ø 90 mm)** :

20 plates ..... BM17308

**Ready-to-melt media** :

10 x 200 mL vials ..... BM05308

## 11 BIBLIOGRAPHY

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## 12 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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