TECHNICAL DATA SHEET

SABOURAUD DEXTROSE CHLORAMPHENICOL AGAR (SDCA)

ENUMERATION OF YEASTS AND MOLDS

1 INTENDED USE

Sabouraud Dextrose chloramphenicol Agar (SDCA) is recommended for the isolation and the enumeration of yeasts and molds, especially when the samples are highly contaminated with bacteria. It is also used as selective isolation media for *Candida albicans* in cosmetic products.

The typical composition corresponds to that defined in the standards NF EN ISO 18416 and NF EN ISO 16212.

2 PRINCIPLES

Peptic digest of Meat is the nitrogen source for growth.

Glucose is an energy source.

Chloramphenicol is a heat-stable, broad spectrum antibiotic which inhibits the development of contaminating microflora.

3 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
- Chloramphenicol ..... 50 mg
- Bacteriological agar ..... 15,0 g

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

4 PREPARATION

- Melt the ready-to-melt medium (BM172) for the minimum amount of time necessary in order to achieve total liquefaction.
- Cool and maintain in a molten state at 44-47 °C.

5 INSTRUCTIONS FOR USE

Enumeration of Yeasts and Molds (NF EN ISO 16212)

Surface Inoculation

- Pour the appropriate amount of complete molten media into sterile Petri plates and let solidify on a cool surface.
- Dry in an incubator with the covers partially removed.
- To the surface of pre-poured plates (BM176 or BM177), or to plates prepared as above, transfer 0.1 mL of the sample to be tested and its serial dilutions.
- Spread the inoculum with a sterile triangle or “hockey stick”.
- Incubate at (25,0 ± 2,5) °C for 3 to 5 days.

✓ **Inoculation :**
0,1 mL on surface

✓ **Incubation :**
3 to 5 jours at 25,0 ± 2,5 °C

Inoculation in depth (pour plates)

- Transfer 1 mL of sample to test and/or its serial dilutions to the bottom of empty, sterile Petri plates.
- Add approximately 15 mL of the molten media, per plate.
- Mix by swirling and let solidify on a cool surface.
- Incubate at 25,0 ± 2,5 °C for 3 to 5 days.

✓ **Inoculation :**
1 mL in depth (pour plates)

✓ **Incubation :**
3 to 5 days at 25,0 ± 2,5 °C

After membrane filtration

- Aseptically filter through a membrane a known volume of the sample to test.
- Deposit the membrane on the surface of the agar, filtered side up and making sure that the membrane and agar are in close contact. The plates should be brought to room temperature before use.
- Incubate at 25,0 ± 2,5 °C for 3 to 5 days.

✓ **Inoculation :**
Membrane filtration

✓ **Incubation :**
3 to 5 days at 25,0 ± 2,5 °C

Detection of *Candidia albicans* (NF EN ISO 18416)

- To the surface of pre-poured plates (BM176 or BM177), or to plates prepared as above, transfer 0.1 mL of the sample to be tested and its serial dilutions.
- Spread the inoculum with a sterile triangle or “hockey stick”.
- Incubate at 32,5 ± 2 °C for 24 to 48 hours.

✓ **Inoculation :**
One loop

✓ **Incubation :**
24 h to 48 h at 32,5 °C

6 RESULTS

After incubation, observe the bacterial growth.
Candida albicans presents convex and creamy white to beige colonies.
Enumerate those plates containing less than 100 colonies.

7 QUALITY CONTROL

Prepared media : amber agar.

Typical culture response after 72 hours of incubation at 20-25 °C, surface inoculation (NF EN ISO 16212) :

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	$P_R \geq 50$ %
Staphylococcus aureus	WDCM 00032	Inhibited, score 0

Typical culture response after 24 hours of incubation at 30-35 °C, qualitative method of inoculation (NF EN ISO 18416) :

Microorganisms		Growth
Candida albicans	WDCM 00054	Good, score 2

8 STORAGE / SHELF LIFE

Media in vials : 2-25 °C.
Complete, pre-poured media : 2-8 °C
The expiration dates are indicated on the labels.

9 PACKAGING

Ready-to-melt media :
10 x 200 mL vials BM17208

Pre-poured media in Petri plates (Ø 90 mm) :
20 plates BM17608

10 BIBLIOGRAPHY

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Ajello, L.. 1957. Cultural methods for human pathogenic Fungi. Journal of Chronic Diseases, **5** : 545.

Pagano, J., Levin, J.D., and Trejo, W.. 1957/1958. Diagnostic medium for differentiation of species of *Candida*. Antibiotics Annual, **5** : 137-143.

NF EN ISO 18416. février 2016. Cosmétiques. Microbiologie. Détection de *Candida albicans*.

NF EN ISO 16212. Aout 2011. Cosmétiques. Microbiologie. Dénombrement des levures et des moisissures.

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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