

# TECHNICAL DATA SHEET

Article No. 9526

DG 18 Agar, prepared plates

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## SPECIFICATION

Prepared plates, 90 mm. Solid differential and low water activity medium used for the determination of xerophilic fungi in low moisture food and in indoor air. ISO 16000-17, ISO 21527-2

Color: Yellowish  
pH: 5.6 ± 0.2 at 25 °C

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## COMPOSITION IN G/L

Peptone	5.000
Glucose	10.000
Potassium dihydrogen Phosphate	1.000
Sulfato magnésico	0.500
Dichloran	0.002
Glycerol	220 ml
Cloramphenicol	0.100
Agar	15.000
Distilled Water	1000 ml
(Final Volume: 1220 ml)	

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## PACKAGING DETAILS

### 9526-20PLATES

20 Plates 90 mm

Content: 21 ± 2 ml

Packaging unit: 1 box with 2 packs of 10 plates/pack. Single cellophane wrapping.



## GUIDELINES

### Description:

Among the culture media for xerophilic fungi, those that have played a more successful role are the ones which include any agent that restrains the continuous growth of zygomycete fungal colonies. Dichloran (dichlorobenzalkonium chloride) and Rose Bengal are two of those inhibitors.

DG18 Agar formulation used is that proposed by Hocking & Pitt in 1980, and it includes Dichloran which limits the size of fungal colonies more efficiently than Rose Bengal. Chloramphenicol inhibits bacterial growth and its thermostability allows it to be included in the medium before sterilization.

The inclusion of 18 % (w/w) of glycerine gives the medium a water activity (aw) of 0.955 without causing any of the problems that generally occur when this water activity is provided by sodium chloride or sugar.

### Technique:

Mass inoculation is recommended by spread plating using an inoculation loop, a swab or by spreading the sample with a Drigasly loop. Never use an inoculum volume greater than 0.1 ml.

According to the standardized technique, plates must be incubated at 22-25 °C, with partial readings after 3 and 5 days, and definitive readings after 7-8 days. Results are expressed in xerophiles-CFU/g or mL of food sample or CFU/m<sup>3</sup> of air.

## MICROBIOLOGICAL CONTROL

Inoculate: Practical range 100 ± 20 CFU. min. 50 CFU (productivity)/10<sup>4</sup>-10<sup>6</sup> CFU (selectivity)

Microbiological control according to ISO 11133:2014/A1:2018.

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020

Microorganism	Growth
<i>Aspergillus brasiliensis</i> ATCC® 16404, WDCM 00053	Good (≥50 %)
<i>S. cerevisiae</i> ATCC® 9763, WDCM 00058	Good (≥50 %)
<i>Bacillus subtilis</i> ATCC® 6633, WDCM 00003	Inhibited
<i>Escherichia coli</i> ATCC® 8739, WDCM 00012	Inhibited
<i>Wallemia sebi</i> ATCC® 42694, WDCM 00182	Good (≥50 %)

### Sterility control:

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

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## BIBLIOGRAPHY

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- ISO 16000-17 Standard. (2008) Indoor air.- Part 17: Detection and enumeration of moulds - Culture-based method.
- ISO 21527-2 :2008. Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds- Part 2: Colony count technique in products with water activity less than or equal to 0,95.
- PITT, J.I., and A.D. HOCKING (1985) *Fungi and Food Spoilage*. Academic Press. Sydney.
- PITT, J.I., A.D. HOCKING and D.R. GLENN (1983) An improved medium for the detection of *Apergillus flavus* and *A. parasiticus*. *J. appl. Bacteriol.* 54:109-114.
- SAMSON, R.A., E.S. HOEKSTRA, J.C. FRISVAD and O. FILTENBORG (2002) *Introduction to the Food Borne Fungi*. 6th ed. Centraalbureau voor Schimmelcultures. Utrecht.
- TAPIA de DAZA, M.S. and L.R. BEUCHAT. (1992) Suitability of modified dichloran glycerol (DGH18) agar for enumerating unstressed and stressed xerophilic molds. *Food Microbiol.* 9:319-333.

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## STORAGE

2-14 °C

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## SHELF LIFE

3.5 months unopened from date of manufacture

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created: 03.08.2022

