

## DG18 AGAR BASE

**A basal medium for the enumeration of yeasts and moulds  
in foods and animal feeding stuffs  
with water activity less than or equal to 0,95 (ISO 21527-2)**

### TYPICAL FORMULA (g/L)

Enzymatic digest of casein	5
D-Glucose (C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> )	10
Potassium dihydrogenphosphate (KH <sub>2</sub> PO <sub>4</sub> )	1
Magnesium sulphate (MgSO <sub>4</sub> .H <sub>2</sub> O)	0,5
Dichloran (2,6-dichloro-4-nitroaniline)	0,002
Agar	13,5

### DIRECTIONS

Suspend 15 g in 500 ml of cold distilled water, heat to dissolve completely and add 110 g of Glycerol anhydrous (REF 421015). Reconstitute one vial of Chloramphenicol Antimicrobial Supplement (REF 4240003) as directed and add the contents to DG18 Agar Base. Sterilize by autoclaving at 121°C for 15 minutes. Cool to below 50°C in a water bath maintained at a temperature of 44°C to 47°C. Mix well and distribute 15 ml amounts into sterile Petri dishes. Avoid exposure of the medium to light.  
Final pH 5,6 ± 0.2

### DESCRIPTION

DG 18 (Dichloran 18% mass fraction glycerol) Agar Base, supplemented with glycerol anhydrous with Chloramphenicol, is recommended by ISO 21527-2 for the enumeration of yeasts and moulds in products intended for human consumption or feeding the animals, having a water activity less than or equal to 0,95 (dry fruits, cakes, jams, dried meat, salted fish, grains, cereals and cereals products, flours, nuts, spices and condiments etc.) by means of the colony count technique. The procedure here described does not apply to dehydrated products with water activity less than or equal to 0,6' and does not allow the enumeration of mould spores and heat-resistant fungi and is not suitable for the enumeration of halophilic and xerophilic fungi

### TECHNIQUE

Prepare the test portion, initial suspension, and further dilution according to the specific International Standard appropriate to the product concerned.

- On to one DG18 Agar plate using a fresh sterile pipette, transfer 0.1 ml of the first decimal dilution (10<sup>-1</sup>), (liquid product) or 0,1 ml of the 10<sup>-2</sup> dilution (other products). To facilitate enumeration of low populations of yeasts and moulds, volume up to 0,3 ml of 10<sup>-1</sup> dilution of sample, or of test sample if liquid, can be spread on to three plates.
- Repeat these operation with subsequent dilutions, using a new sterile pipette for each decimal dilution. For particulate or solid foods (nuts or grains etc), direct plating is recommended; samples of these types of products are surface disinfected in a 0.35% sodium hypochlorite solution with a contact time of 2 minutes, followed by rinsing with sterile distilled water, dried on a sterile paper and than placed on solidified media.
- Spread the liquid over the surface of the agar with a sterile spreader, until the liquid is completely absorbed into the medium.
- Incubate aerobically the inoculated plates in an upright position at 25 ± 1°C.
- Read the plates after 2 days, 5 days and 7 days of incubation. If the presence of *Xeromyces bisporus* is suspected, incubate the plates for 10 days.
- Select the dishes containing less than 150 colonies/propagules/germs and count these colonies/propagules/germs,
- Report as number of colonies/propagules/germs per gram of food.

**QUALITY CONTROL**

(25 ± 1°C, 5 DAYS)

Productivity (strains recommended by ISO 21527-2)

*S.cerevisiae* ATCC 9763: growth*Wallemia sebi* ATCC 42694: growth*Aspergillus restrictus* ATCC 42693 growth with limited colony spreading*Eurotium rubrum* ATCC 42690 growth with limited colony spreading

Selectivity (strains recommended by ISO 21527-2)

*E.coli* ATCC 25922: inhibited*B.subtilis* ATCC 6633: inhibited**APPEARANCE**

Dehydrated medium: beige, homogeneous, fine, free flowing powder.

Prepared medium: beige, limpid.

**STORAGE AND PRECAUTIONS**

Keep the bottle tightly closed away from bright light at 10-30°C and use before the expiry date on the label.

This product is classified as "non hazardous" according to EU Directives and doesn't include hazardous ingredients in a concentration ≤1% and than doesn't require special labels.

In any case the culture media in powder form should be handled according to Good Laboratory Practices avoiding dust inhalation, contact with eyes and skin, and clothing.

Store the prepared plates of medium at 2-8°C in the dark.

**REFERENCE**

ISO 21527-2 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.

**PACKAGING****4013942**      **DG18 Agar Base 500 g**      **(16.6 L)****4013944**      **DG18 Agar Base 5000 g**      **(166 L)**