

DICHLORAN-GLYGEROL (DG18) AGAR BASE DICHLORAN-GLYGEROL (DG18) AGAR + CAF

(ISO 21527-2)
IVD in Class A, EU Reg. 2017/746

For in vitro diagnostic use

Selective medium for the enumeration of yeasts and moulds, according to ISO 21527.

DESCRIPTION

Dichloran Glycerol (DG18) Agar is a medium used for the selective isolation and enumeration of yeasts and moulds in food. This medium conforms to ISO 21527-2 for microbiological examination of products that have a water activity less than or equal to 0.95 such as dry fruits, cakes, jams, dried meat, salted fish, grains, cereal products, flour, nuts, spices and condiments, etc.

PRINCIPLE

Enzymatic digest of casein provides amino acids, carbon, nitrogen, vitamins and minerals for organisms growth. Glucose is included as energy source. Monopotassium phosphate is a buffering agent. Magnesium sulfate provides divalent cations and sulfur. Dichloran is an anti-fungal agent incorporated into the medium to reduce colony diameters of spreading fungi. Chloramphenicol inhibits the growth of accompanying bacterial flora. Inhibition of bacterial growth and restriction of spreading of more-rapidly growing moulds aids in the isolation of slow-growing fungi. Glycerol is a carbon source. Agar is the solidifying agent.

DICHLORAN-GLYCEROL (DG18) AGAR BASE:

COMPOSITION	g/L
Casein Enzymatic Digest	5.0
D-Glucose	10.0
Monopotassium Phosphate	1.0
Magnesium Sulfate	0.5
Dichloran	0.002
Agar	15.0

Final pH 5,6 ± 0,2 at 25°C

SUPPLEMENT: CHLORAMPHENICOL SELECTIVE SUPPLEMENT (REF. 16005):

COMPOSITION	500 mL/DG 18 AGAR BASE
Chloramphenicol	50.0 mg

PREPARED MEDIUM: DICHLORAN-GLYCEROL (DG18) AGAR + CAF:

COMPOSITION	
DG 18 AGAR BASE	1000 mL
Chloramphenicol	100 mg
Glycerol	220 mL

Final pH 5,6 ± 0,2 at 25°C

WARNING AND PRECAUTIONS

For in vitro diagnostic use.

Observe the precautions normally taken when handling laboratory reagents.

Dehydrated medium: HIGHLY HYGROSCOPIC. During the handling, wear dust protection mask. Avoid the eye contact. Do not use beyond the expiration date or if the product shows signs of deterioration, an altered color or has compacted.

Prepared Medium: The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous.

Safety Data Sheet is available on request for professional users.

All waste must be disposed of according to local directives.

STORAGE AND STABILITY

Dehydrated medium:	10-30°C
Prepared medium:	10-25°C

The product is stable until the expiration date indicated on the label under the recommended storage conditions.

PREPARATION

Dehydrated medium: Suspend 15.75 g of powder in 500 mL of deionized or distilled water. Bring to boil and shake until completely dissolved. Add 110 g glycerol (REF. 16038) and the reconstituted content of a vial of Chloramphenicol Supplement (REF. 16005). Sterilize at 121°C for 15 minutes. Cool up to 45-50°C. Pour in Petri dishes.

Prepared medium (bottles): Melt the content of the bottle in a water bath at 100°C until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

PROCEDURE

According to ISO 21527-2, spread 0.1 ml of the test sample or 0.1 ml of the initial suspension onto one plate of Dichloran Glycerol (DG18) Agar and 0.1 ml of the first decimal dilution over a second plate. Repeat inoculation with subsequent dilutions. Incubate plates aerobically at 25 ± 1°C for 5-7 days.

RESULTS

Select plates containing <150 colonies/propagules/germs and count after 2 days and again after 5-7 days of incubation. Report the results as CFU per g or per ml of sample allowing for the dilution factor.

QUALITY CONTROL

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

Prepared medium: amber, slightly opalescent gel.

Typical response after incubation at 25°C for 5 days:

MICROORGANISM	GROWTH
Saccharomyces cerevisiae WDCM 00058	Good
Walleimia sebi WDCM 00182	Good
Escherichia coli WDCM 00013	Inhibited
Bacillus subtilis WDCM 00003	Inhibited

REFERENCES

- Hocking A. D. and Pitt J. I. (1980) J. Appl. & Env. Microbio. 139. 488-492.
- Beuchat L. R. and Hwang C. A. (1996) Int. J. Food Microbio. 129. 161-166.
- Beckers H. J., Boer E., van Eikelenboom C., Hartog B. J., Kuik D., Mol N., Nooitgedagt A. J., Northolt M. O. and Samson R. A. (1982) Intern. Stand. Org. Documen ISO/TC34/SC9/N151
- 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.

PRESENTATION

	Packaging	REF.
DICHLORAN-GLYGEROL (DG18) AGAR BASE	500 g (15.8 L)	10143

Supplements: GLYCEROL

1 x 200 mL Bottle 16038

CHLORAMPHENICOL SELECTIVE SUPPLEMENT

10 Bottles 16005

A bottle of Chloramphenicol Selective Supplement is used to prepare 500 ml of selective medium. For each 500 g pack of base medium (Ref. 10143) approximately 3 packs of 16005 are required.

Prepared medium:

DICHLORAN-GLYGEROL (DG18) AGAR + CAF		
	6 x 100 mL Bottles	63380
	6 x 200 mL Bottles	63280
	12 x 200 mL Bottles	63678
	20 pcs (90 mm ready-to-use plates)	2351602/20

SYMBOLS

	Read the instructions		Biological hazard
	CE Mark (product complies with the requirements of Regulation (EU) 746/2017)		
	Temperature limitation		Use by
	For in vitro diagnostic use		Manufacturer