

Dichloran Glycerol (DG18) Agar Base

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

TYPICAL FORMULA	(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	

DESCRIPTION

Dichloran Glycerol (DG18) Agar Base is a medium used with supplements for the selective isolation and enumeration of fungi in food.

The complete 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 easing the colony count. Inhibition of bacterial growth and restriction of spreading of more-rapidly growing moulds aids in the isolation of slow-growing fungi. Agar is the solidifying agent.

Glycerol Supplement (ref. 80021) is included to lower the water activity of the medium and provide an additional carbon source.

Chloramphenicol Supplement (ref. 81017) is added to inhibit the growth of accompanying bacterial flora.

PREPARATION

Suspend 31.5 g of powder in 1 liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Add 220 g glycerol (about 180 ml Glycerol Supplement) and the reconstituted content of 2 vials (14 ml) of Chloramphenicol Supplement. Sterilize at 121°C for 15 minutes. Cool up to 45-50°C. Pour in Petri dishes.

TECHNIQUE

According to ISO 21527-2, spread 0.1 ml of the 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 and up to 10 days if the presence of *Xeromyces bisporus* is suspected.

INTERPRETATION OF 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.

STORAGE AND TRANSPORT CONDITIONS

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. it is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

1. EN ISO 11133:2014. Microbiology of food, animal feed and water -- Preparation, production, storage and performance testing of culture media.
2. 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.
3. Beuchat and Cousin (2001) In Downes and Ito (ed.). Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association. Washington, D.C.
4. U.S. Food and Drug Administration (1995) Bacteriological analytical manual, 8th ed. AOAC International, Gaithersburg, Md.
5. Banks, Board and Paton (1985) Lett. Appl. Microbiol. 1:7
6. King, Hocking and Pitt (1979) Appl. Environ. Microbiol. 37:959.



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PRODUCT SPECIFICATIONS

NAME

Dichloran Glycerol (DG18) Agar Base

PRESENTATION

Dehydrated medium

STORAGE

10-30°C

PACKAGING

Ref.	Content	Packaging
610238	500 g	500 g of powder in plastic bottle
620238	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM

5.6 ± 0.2

USE

Dichloran Glycerol (DG18) Agar Base is a medium used with supplements for the selective isolation and enumeration of fungi in food, according to ISO 21527-2

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Powder medium

Appearance: free-flowing, homogeneous

Colour: beige

Ready-to-use medium

Appearance: slightly opalescent

Colour: amber

SHELF LIFE










4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 50-100 CFU
Inoculum for selectivity: 10⁴-10⁶ CFU
Incubation Conditions: 5 days at 25 ± 1°C, in aerobiosis

Microorganism		Growth
<i>Saccharomyces cerevisiae</i>	WDCM 00058	Good
<i>Wollemia sebi</i>	WDCM 00182	Good
<i>Escherichia coli</i>	WDCM 00013	Inhibited
<i>Bacillus subtilis</i>	WDCM 00003	Inhibited

TABLE OF SYMBOLS

 LOT	Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 REF	Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instructions for use	



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