



DG18 Agar + Neutralizing

Selective medium for environmental and personnel hygiene monitoring with inactivation of disinfectants.

Instructions For Use

ENGLISH

INTENDED PURPOSE

Selective solid medium used for the monitoring of microbial contamination. This medium is not intended for use in the diagnosis of disease or other conditions in humans.

DESCRIPTION

DG (Dichloran Glycerol) 18 Agar + Neutralizing is a prepared plated medium used for selective isolation and enumeration of osmophilic yeasts and xerophilic moulds in surfaces testing and air microbial control by dynamic sampling technique.

The composition of the base culture medium complies with 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. In addition, neutralizing agents are included in the medium to inactivate residual disinfectants allowing detection of microorganisms surviving after treatment of surface and material with antiseptics.

TYPICAL FORMULA*	(g/litre)
Casein Enzymatic Digest	5.0
D-Glucose	10.0
Potassium Dihydrogenphosphate	1.0
Magnesium Sulfate	0.5
Dichloran	0.002
Chloramphenicol	0.1
Glycerol	220.0
Agar	15.0
Histidine	1.0
Lecithin	0.7
Polysorbate 80	5.0
Sodium Thiosulfate	0.5
Final pH 5.6 ± 0.2 at 25°C	

*Adjusted and/or supplemented as required to meet performance specifications.

METHOD 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. Histidine, lecithin, polysorbate 80 (Tween 80) and sodium thiosulfate are neutralizers which have demonstrated their efficiency against multiple disinfectants containing various active agents, i.e. alcohol (70% ethanol or isopropyl alcohol), aldehyde, dichloroisocyanurate, glucoprotamine, hydrogen peroxide, peracetic acid, phenols, quaternary ammonium.

TEST PROCEDURE

For Active Air Sampling, place the plate, lid up, in the air sampler, remove the lid of the plate and sample a specific volume of air according to laboratory procedure.

For Surface Testing, gently press the agar surface on the test surface for about 10 seconds with a steady pressure. Do not move laterally the plate. Residues of the medium should be subsequently removed from the area tested.

After sampling close the plate with the lid and incubate aerobically at 25 ± 1°C for 5 to 7 days (use an open plastic bag to place the plates in the incubator in order to prevent any contamination). It is recommended to incubate for up to 10 d if the presence of *Xeromyces bisporus* is suspected.

INTERPRETING RESULTS

Observe for fungal growth and count characteristic colonies/propagules after 2-day incubation and again at the end of the incubation period. Record the number of CFU per plate.

The user is responsible for interpretation. It is recommended to establish alarm levels and levels that require user intervention, in order to take the most appropriate corrective action.

STORAGE

Store at 10-25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

Avoid quick temperature shifts to prevent condensation.

SHELF LIFE

6 months.

QUALITY CONTROL

Appearance: Slightly opalescent, light amber.

Expected Cultural Response:

Control strain		Inoculum	Incubation	Specification
<i>Saccharomyces cerevisiae</i>	WDCM 00058 (ATCC 9763)	50-100 CFU	5 days / 25 ± 1°C	Good growth ($P_R \geq 0.5$)
<i>Saccharomyces cerevisiae</i> + 50 µl Aerodesin 2000	WDCM 00058 (ATCC 9763)			
<i>Walleimia sebi</i>	WDCM 00182 (ATCC 42694)			
<i>Escherichia coli</i>	WDCM 00013 (ATCC 25922)	10 ⁴ -10 ⁶ CFU		Total inhibition
<i>Bacillus subtilis</i>	WDCM 00003 (ATCC 6633)			

A productivity ratio (P_R) of 0.5 is equivalent to a recovery rate of 50%.

Please refer to the actual batch related Certificate of Analysis (CoA).

PERFORMANCE CHARACTERISTICS

Performance testing of DG18 Agar + Neutralizing was carried out using the QC strains listed above. The results obtained met the established criteria.

LIMITATIONS

Invalid results can be caused by poor sample quality, improper sample collection, improper transportation, improper laboratory processing, or a limitation of the testing technology. The operator should understand the principles of the procedures, including its performance limitations, in advance of operation to avoid potential mistakes.

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

WARNING AND PRECAUTIONS

For professional use only. Operators must be trained and have certain experience. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

DISPOSAL OF WASTE

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

BIBLIOGRAPHY

See the references at the end of this document.

TABLE OF SYMBOLS

See the table of symbols at the end of this document.

ORDER INFORMATION

Product	Format	Packaging	Ref.
DG18 Agar + Neutralizing	Contact plate	20 (2 x 10) plates	15389

Revision History

Revision	Release Date	Change Summary
0	2024-05-24	Document creation











This IFU document and the SDS are available from the online Support Center:

liofilchem.com/ifu-sds

REFERENCES

1. EN ISO 11133:2014+Amd1:2018. 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.

TABLE OF SYMBOLS

	Batch code
	Catalogue number
	Manufacturer
	Use by
	Fragile, handle with care
	Temperature limitation
	Contains sufficient for <n> tests
	Consult instructions for use
	Do not reuse
	Keep away from sunlight



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