Dichloran Glycerol Medium Base ISO

Intended Use
A medium recommended for selective isolation of xerophilic moulds from food and clinical samples, in compliance with ISO specification ISO 21527-2:2008(E).

Summary
Dichloran Glycerol Medium was formulated by Hocking and Pitt and is recommended for isolation and enumeration of xerophilic moulds from dried and semidried foods. The glycerol at 18% (w/w) lowers the water activity (aw) from 0.999 to 0.95 without causing any problem. This restrictive characteristic makes the medium especially suitable for foods.

Principle
Casein enzymatic digest provides carbon, nitrogen, vitamins and minerals. D-Glucose is a carbohydrate source. Phosphate buffers the medium. Magnesium sulfate provides divalent cations and sulfate. Dichloran is an antifungal agent, added to the medium to reduce colony diameters of spreading fungi. Chloramphenicol is included to inhibit the growth of bacteria present in environmental and food samples. This medium can also be used for isolation of fungi from clinical samples. Inhibition of growth of bacteria and restriction of spreading of more-rapidly growing moulds aids in the isolation of slow-growing fungi by preventing their overgrowth by more-rapidly growing species. The medium can also be used as general medium for the isolation of yeasts and moulds from foodstuffs.

Formula*

Ingredients	**g/L**
Peptone	5.0
D-Glucose	10.0
Potassium Dihydrogen Phosphate	1.0
Magnesium Sulphate	0.5
Dichloran	0.002
Chloramphenicol	0.1
Agar	15.0
Final pH (at 25°C)	5.6 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Clinical samples – Skin scrapings
Food samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 15.80 g of the powder in 500 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Add 110.00 g of glycerol (Analytical Reagent Grade).
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
5. Cool to 45°C-50°C.
6. Mix well and pour into sterile petridishes.

Quality Control

Dehydrated Appearance: Cream to Yellow coloured homogenous, free following powder.
Prepared Appearance: Creamy yellow coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed with added 22 g/L of glycerol after an incubation at 25°C for upto 6 days.

Organism (ATCC)	Growth
Bacillus spizizenii (6633)	Inhibited
Candida albicans 3147 (10231)	Good
Escherichia coli (25922)	Inhibited
Mucor racemosus (42647)	Good
Saccharomyces cerevisiae NRRL Y-567 (9763)	Good

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Use and Disposal of Dehydrated Media

Inoculation of culture media with bacteria, deliberately and accidentally, leads to a very great number of organisms being produced. High concentrations of any organisms are potentially hazardous and must be disposed off safely. Therefore, after use, prepared plates, samples, sample containers or other contaminated material must be sterilized or incinerated before discarding. All autoclaved biohazards should be disposed off in accordance with state and local environmental regulations.
Only qualified personnel who have been trained in microbiological procedures should handle all infected specimens and inoculated culture media. User should ensure that any machinery or apparatus used and by chance contaminated must be safely disinfected or sterilized. The environment in which microbiological cultures are handled must also be considered.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Beckers H.J., et al, 1982, Intern. Stand. Org. Document ISO/TC34/SC9/N151
2. Hocking A.D. and Pitt J.I., 1980, J. Appl. Environ. Microbiol., 39:488.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. Jorgensen, J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. DEAK, T., CHEN, J., GOLDEN, D.A., TAPIA, M.S., TORNAI-LEHOCZKI, J., VILJOEN, B.C., WYDER, M.T., BEUCHAT, L.R. Comparison of dichloran 18 % glycerol (DG18) agar with general purpose mycological media for enumerating food spoilage yeasts. Int. J. Food Microbiol. 2001, 67, pp. 49-53
6. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201040440100	Dehydrated Culture Media	100 g
201040440500	Dehydrated Culture Media	500 g