

**DICHLORAN GLYCEROL MEDIUM BASE****TM 981**

For selective isolation of xerophilic molds from foods

Composition

Ingredients	Gms/Ltr.
Agar	15.000
Dextrose	10.000
Peptic digest of animal tissue	5.000
Mono potassium phosphate	1.000
Magnesium sulphate	0.500
Chloramphenicol	0.100
Dichloran	0.002

*Dehydrated powder, hygroscopic in nature, store, in a dry place in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for use

Dissolve 31.6gms in 1000ml distilled water. Gently heat to boiling, with gentle swirling to dissolve the medium completely. Add 220 grams of glycerol (Analytical Reagent Grade). Sterilize by autoclaving at 15 psi (at 121°C) for 15 minutes. **DO NOT OVERHEAT**. Mix well. Cool to 45-50°C and dispense as desired.

Appearance: Medium amber colour, clear to slightly opalescent gel

pH (at 25°C): 5.6 ± 0.2

Principle

DICHLORAN GLYCEROL MEDIUM BASE was formulated by Hocking and Pitt and is a recommended medium for isolation and enumeration of xerophilic moulds from dried/semidried foods, e.g., dry fruits, cereals, flour, spices, confectionery items (e.g. cakes and cookies) and dried meat/fish products, etc. Glycerol is used at 18% (v/v) to reduce the water activity (a_w) of the medium from 0.999 to 0.95 without creating any other problem. Peptic digest of animal tissue serves as a source of nitrogen, vitamins and minerals. Dextrose is a carbon and energy source. Magnesium sulfate provides divalent cations and sulfate. Monopotassium phosphate is a buffering agent. Dichloran is an antifungal agent used to reduce the colony diameter of spreading fungi. Chloramphenicol inhibits the bacterial growth, present in environment and food sample. Agar is a gelling agent. Inhibition of bacterial growth and restriction of spreading of rapidly growing fungal species supports the isolation of xerophilic slow-growing molds.

Interpretation

Cultural characteristics observed after inoculating (10^3 - 10^4 CFU/ml), for incubation period of 6 days at 25 ± 2°C, with added Glycerol.



PRODUCT DATA SHEET

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth
<i>Candida albicans</i>	10231	10 ³	Good-luxuriant
<i>Saccharomyces cerevisiae</i>	9763	10 ³	Good-luxuriant
<i>Escherichia coli</i>	25922	10 ⁴	Inhibited
<i>Bacillus subtilis</i>	6633	10 ⁴	Inhibited

References

1. Hocking, A.D. and Pitt, J.I. 1980. J. Appl. Environ. Microbiol. **39**:488-492.
2. Beuchat, L.R., and Hwang, C.A. 1996. Int. J. Food Microbiol. **29**:161-166.
3. Beckers, H.J., et al. 1982. Int. Stand. Org. Document ISO/TC34/SC9/N151.