



## Yeast Mould Chloramphenicol Agar, Modified

M1787

Yeast Mould Chloramphenicol Agar, Modified is recommended for enumeration of yeasts and moulds from foods using membrane filter technique. Also recommended when ISO-Grid and Neo-Grid protocols of filtration are followed.

### Composition\*\*

Ingredients	Gms / Litre
Papaic digest of soyabean meal	20.000
Casein enzymic hydrolysate	20.000
Dextrose	5.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.400
Trypan Blue	0.030
Chloramphenicol	0.100
Agar	15.000
Final pH ( at 25°C)	7.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 67.53 grams in 995 ml distilled water. Heat to boiling to dissolve the medium completely by agitating intermittently. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add the rehydrated contents of 1 vial of Chlortetracycline selective supplement (FD120). Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Yeast Mould Chloramphenicol Agar, Modified is recommended for enumeration of yeasts and moulds from foods using membrane filter technique. ISO-Grid and Neo-Grid protocols of filtration can be adopted for the same (1,2). To quantify the number of yeasts and moulds, a known amount of sample homogenate of food is prepared. Further 1 ml of homogenate is passed through the pre filter and ISO GRID membrane filter. The membrane filter is then placed on surface of Yeast Mould Chloramphenicol Agar, Modified plate. The surface of plate should be dry to avoid merging of developed colonies. Plates should be incubated in inverted position. Results may be interpreted after 48-52 hours on incubation at 20-25°C. It may be incubated further upto 72 hours for slow growing yeasts. The membrane filter is examined for developed colonies. Yeasts develop as blue coloured colonies while molds as blue-grey in colour.

This medium contains papaic digest of soyabean meal and casein enzymic hydrolysate supplying necessary nitrogenous and vitamin sources. Dextrose serves as fermentable carbon source. Sodium chloride maintains osmotic balance. Dipotassium hydrogen phosphate is a buffering agent. Trypan blue imparts blue colour to colonies of yeasts and moulds (3). Chlortetracycline and chloramphenicol selectively inhibits bacterial growth.

### Quality Control

#### Appearance

Cream to tan homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Light blue to dark blue grey coloured clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 6.75% w/v aqueous solution at 25°C. pH : 7.0±0.2

#### pH

6.80-7.20

**Cultural Response**

M1787: Cultural characteristics observed with added chlortetracycline Selective supplement (FD120) after an incubation at 20-25°C for 48-72 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
<b>Cultural Response</b>				
* <i>Aspergillus brasiliensis</i> ATCC 16404	50-100	good-luxuriant	>=50%	blue
<i>Candida albicans</i> ATCC 10231	50-100	good-luxuriant	>=50%	blue
<i>Escherichia coli</i> ATCC 25922	>=10 <sup>3</sup>	inhibited	0%	-
<i>Bacillus subtilis</i> ATCC 6633	>=10 <sup>3</sup>	inhibited	0%	-
<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	good-luxuriant	>=50%	blue

\*Key: Formerly known as *Aspergillus niger*

**Storage and Shelf Life**

Store between 15-25°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

**Reference**

1. Entis, P. 1996. J. AOAC Int. 79: 1069-1082.
2. Entis P. and I. Lerner. 1996. J. Food Prot. 59: 416.
3. Lin, C. C. S., D. Y. C. Fung and P. Entis. 1984. Can. J. Microbiol. 30: 1405-1407.

Revision : 03 / 2015

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