Actidione Agar with Acitidione

M400

Actidione Agar with Acitidione® is used for the enumeration and detection of bacteria in specimens containing large number of yeasts and moulds.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Yeast extract	4.000
Dextrose	50.000
Monopotassium phosphate	0.550
Potassium chloride	0.425
Calcium chloride	0.125
Magnesium sulphate	0.125
Ferric chloride	0.0025
Manganese sulphate	0.0025
Bromo cresol green	0.022
Actidione (Cycloheximide)	0.010
Agar	15.000
Final pH (at 25°C)	5.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 75.26 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C. Mix well before pouring into sterile Petri plates.

Warning : *Actidione (Cycloheximide) is very toxic. Avoid skin contact or aerosal formation and inhalation.

Principle And Interpretation

Actidione Agar was formulated by Green and Gray (1), which may be used for microbiological investigation during brewing and baking. Actidione (Cycloheximide) at a concentration of 0.001% permits the growth of bacteria and inhibits the growth of most yeasts and moulds except dermatophytes. This medium may be used for the estimation of bacterial contamination of pitching yeast. Addition of penicillin or streptomycin may be used for selective isolation of dermatophytes.

Casein enzymic hydrolysate acts as source of nitrogen while yeast extract serves as a rich reservoir of vitamins. Dextrose in high amount along with mineral salts at acidic pH favour sugar fermentation.

Quality Control

Appearance
Light yellow to light green homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Greenish blue clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 7.53% w/v aqueous solution at 25°C. pH : 5.5±0.2

pH
5.30-5.70

Cultural Response
M400: Cultural characteristics observed after an incubation at 30ºC for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery

Cultural Response

Escherichia coli ATCC 25922	50-100	good-luxuriant	>=50%
Lactobacillus fermentum ATCC 9338	50-100	good-luxuriant	>=50%
Proteus mirabilis ATCC 25933	50-100	good-luxuriant	>=50%
Saccharomyces cerevisiae ATCC 9763	>=10^3	inhibited	0%
Saccharomyces uvarum ATCC 28098	>=10^3	inhibited	0%

Storage and Shelf Life

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

Reference

1. Green, S.R. and Gray, P.P. 1950, Wallerstein Lab. Communication 13,357.

Revision : 1 / 2011