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# Actidione Agar w/ Actidione

Actidione Agar w/ Actidione designed for the enumeration of bacteria in specimens containing large numbers of yeasts and moulds

| | | | |
|---|---|---|---|
| REF: BS.1/NZ01.100.0100 | 100 Gram | REF: BS.1/NZ01.250.0250 | 250 Gram |
| REF: BS.1/NZ01.500.0500 | 500 Gram | | |

## PRINCIPLE AND INTERPERTATION :

Actidione Agar was formulated by Green and Gray (1) for use in microbiological investigations related to brewing and baking processes. Actidione (Cycloheximide), incorporated at a concentration of 0.001%, allows the growth of bacteria while inhibiting most yeasts and moulds, with the exception of dermatophytes. This medium can be employed for estimating bacterial contamination in pitching yeast. The addition of penicillin or streptomycin enhances the selective isolation of dermatophytes. Tryptone serves as a source of nitrogen, whereas yeast extract provides a rich supply of vitamins. A high concentration of dextrose, together with mineral salts under acidic pH conditions, supports sugar fermentation.

## MEDIA COMPOSITION

| Item | Formula per liter of medium |
|---|---|
| Tryptone | 5.00 gm |
| Dextrose (Glucose) | 50.00 gm |
| Yeast extract | 4.00 gm |
| Potassium dihydrogen phosphate | 0.550 gm |
| Potassium chloride | 0.425 gm |
| Calcium chloride anhydrous | 0.125 gm |
| Magnesium sulphate | 0.125 gm |
| Ferric chloride | 0.0025 gm |
| Manganese sulphate | 0.0025 gm |
| Bromo cresol green | 0.022 gm |
| Actidione (Cycloheximide) | 0.010 gm |
| Agar | 15.00 gm |

**Final pH** (at 25°C)5.5 ± 0.2 ** Formula adjusted, standardized to suit performance parameters.

## PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  ***S56:*** dispose of this material and its container at hazardous or special waste collection point.
  ***S57:*** use appropriate container to avoid environmental contamination.
  ***S61:*** avoid release in environment.

For further information, refer to the Actidione Agar material safety data sheet.

## STORAGE ABaND STABILITY

***BioScien*** Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

### *PREPARATION*

Suspend75.26 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well before pouring into sterile Petri plates.

### *Deterioration*

The color of ***BioScien*** Actidione Agar is light yellow to light green, appearing as a homogeneous, free-flowing powder. Upon preparation, a greenish-blue, clear to slightly opalescent gel is formed in Petri plates.

## EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri dishes
- Incubator
- Autoclave

## PERFORMANCE CHARACTERISTICS

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

| Organisms (ATCC) | Growth |
|---|---|
| Escherichia coli ATCC 25922 | Good -luxuriant |
| Lactobacillus fermentum ATCC 9338 | Good -luxuriant |
| Proteus mirabilis ATCC 25933 | Good -luxuriant |
| Saccharomyces cerevisiae ATCC 9763 | inhibited |
| Saccharomyces uvarum ATCC 28098 | inhibited |

## QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact ***BioScien*** technical support.

## REFERENCE


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

2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition

3. 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.

4. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th

5. Ed., American Public Health Association, Washington, D.C


**SYMBOLS IN PRODUCT LABELLING**

| | | | |
|---|---|---|---|
| IVD | For in-vitro diagnostic use | Σ | Number of <n> test in the pack |
| LOT | Batch Code/Lot number | ⚠ | Caution |
| REF | Catalogue Number | | Do not use if package is damaged |
| | Temperature Limitation | | Consult Instruction for use |
| | Expiration Date | | |
| | Manufactured by | | |