# Ascospore Agar

**M804**

## Intended Use:

Recommended for detection of ascosporogenous yeasts.

## Composition**

| Ingredients | Gms / Litre |
|---|---|
| Yeast extract | 2.500 |
| Dextrose (Glucose) | 1.000 |
| Potassium acetate | 10.000 |
| Agar | 30.000 |
| Final pH ( at 25°C) | 6.4±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 43.50 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 and pour into sterile Petri plates.

## Principle And Interpretation

Ascospore Agar is recommended for the enrichment and detection of ascospores in ascosporogenous yeasts such as *Saccharomyces cerevisiae*. It is based on the formula developed by McClary et al (3). Ascospore Agar is the modification of McClary medium with the addition of potassium acetate in place of sodium acetate. Acetate salt of potassium was found to be superior to sodium salt for sporulation in *Saccharomyces* (3,4).

Dextrose and yeast extract provide the nutrients required for the growth and also stimulate ascospore formation in yeasts. Slightly acidic pH of the medium favours the growth of *Saccharomyces cerevisiae*.

## Type of specimen

Brewery sample

## Specimen Collection and Handling

For brewery samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
After use, contaminated materials must be sterilized by autoclaving before discarding.

## Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

## Limitations

1. Due to nutritional variation certain strain may show poor growth.

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

**Appearance**
Light yellow to brownish yellow homogeneous free flowing powder

**Gelling**
Firm, comparable with 3.0% Agar gel

**Colour and Clarity of prepared medium**
Medium amber coloured clear to slightly opalescent gel forms in Petri plates

**Reaction**
Reaction of 4.35% w/v aqueous solution at 25°C. pH : 6.4±0.2

**pH**
6.20-6.60

**Cultural Response**
Cultural characteristics observed after an incubation at 25-30°C for upto 3-6 days .

| Organism | Inoculum (CFU) | Growth | Recovery | Ascospores |
|---|---|---|---|---|
| *Candida albicans ATCC 10231* (00054*) | 50-100 | luxuriant | >=50% | negative |
| *Saccharomyces cerevisiae ATCC 9763* (00058*) | 50-100 | luxuriant | >=50% | positive |

Key : (*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°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.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

## Reference

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

2. 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.

3. McClary D.O., Nulty W.L. and Miller G.R., 1959, J.Bacteriol., 78:362

4. MacFaddin J.F.,1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Williams and Wilkins, Baltimore.

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