



## PRODUCT DESCRIPTION

AS-1286 | Malt Extract Agar

[www.ausamics.com.au](http://www.ausamics.com.au)

### Malt Extract Agar

Selective Fungal Culture Medium for Yeasts and Moulds

Catalogue Number: AS-1286

| Application                       | Medium Type                    | Typical pH         | HS Code    |
|-----------------------------------|--------------------------------|--------------------|------------|
| Fungi, yeasts & mould cultivation | Selective solid culture medium | 5.4 ± 0.2 at 25 °C | 3821.00.00 |

#### Overview

Malt Extract Agar is a specialised solid growth medium formulated for the cultivation, isolation, and enumeration of fungi, yeasts, and filamentous moulds. The inclusion of malt extract provides a rich carbohydrate source that supports vigorous fungal growth, sporulation, and characteristic colony development.

The naturally acidic pH of the medium (5.4 ± 0.2) inhibits the growth of most bacteria, promoting selective fungal cultivation. Selectivity can be further enhanced by the addition of antibiotics such as chloramphenicol, tartaric acid, or lactic acid, depending on the target organisms and application.

Modified formulations of Malt Extract Agar have been referenced in mycological studies, including selective growth of *Aspergillus flavus* and differentiation of yeast colonies from bacterial colonies. AuSaMicS Malt Extract Agar is supplied as a high-quality dehydrated powder to ensure consistent performance and reliable results in laboratory and industrial applications.

#### Principle of the Medium

The medium relies on three key functional components working together to create optimal conditions for fungal cultivation:

|                     |   |
|---------------------|---|
| <b>Malt Extract</b> | Provides fermentable carbohydrates, amino acids, vitamins, and minerals to support vigorous fungal growth and sporulation |
| <b>Agar</b>         | Solidifying agent providing a stable, clear growth surface suitable for colony enumeration and morphological study        |
| <b>Acidic pH</b>    | Naturally suppresses bacterial growth (pH 5.4 ± 0.2) while favouring yeasts, moulds, and filamentous fungi                |

#### Typical Composition (per litre)



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| Component           | Function                               | Amount |
|---------------------|--|--------|
| Malt Extract        | Carbon, nitrogen, vitamins, minerals   | 30.0 g |
| Mycological Peptone | Additional nitrogen and growth factors | 5.0 g  |
| Agar                | Solidifying agent                      | 15.0 g |

**Total solids:** 50.0 g/L | Final pH: 5.4 ± 0.2 at 25 °C

## Applications

### Mycology & Fungal Research

- Cultivation of yeasts and filamentous fungi
- Fungal sporulation and morphology studies
- Maintenance and propagation of fungal reference strains

### Food & Beverage Microbiology

- Detection and enumeration of spoilage yeasts and moulds in food products
- Quality control testing of food, dairy, and beverage products
- Shelf-life studies and product contamination investigations

### Environmental & Industrial Monitoring

- Air, surface, and water fungal monitoring
- Environmental sampling in cleanrooms, food processing facilities, and hospitals
- Fermentation and industrial microbiology applications

### Differentiation Studies

- Selective growth of *Aspergillus flavus* (modified formulations with indicator dyes)
- Differentiation of yeast and bacterial colonies using indicator dyes

## Key Features & Benefits

- Selective acidic pH (5.4 ± 0.2) suppresses bacterial contamination without selective agent addition
- Rich malt extract base promotes abundant sporulation and characteristic colony morphology
- Suitable for direct plating, pour plate, and spread plate techniques
- Compatible with antibiotic supplementation (chloramphenicol, gentamicin) for enhanced selectivity



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- Consistent batch-to-batch performance for reliable enumeration and comparison
- Widely referenced in APHA, ISO, and AOAC standard methods for food and environmental mycology

## Preparation Instructions

1. Suspend 50.0 g of dehydrated medium in 1 litre of demineralised or purified water.
2. Heat with frequent agitation until fully dissolved. Do not overheat.
3. Sterilise by autoclaving at 121 °C for 15 minutes.
4. Cool to 45–50 °C.
5. If required, aseptically add selective agents (e.g. 0.05 g/L chloramphenicol or 1.4 mL/L lactic acid) at this stage.
6. Mix thoroughly and pour into sterile Petri dishes or dispense into sterile tubes.
7. Allow to solidify at room temperature before use or storage.

*Note: Do not overheat or boil vigorously as this may alter the pH and performance of the medium.*

## Incubation & Typical Growth

Inoculate by surface spread, pour plate, or streak plate method. Incubate aerobically at 25–30 °C for 3–7 days. For slower-growing moulds, extend incubation to 14 days.

| Organism                            | Expected Result                      | Incubation         |
|-------------------------------------|--------------------------------------|--------------------|
| Aspergillus brasiliensis ATCC 16404 | Good growth, black conidial heads    | 25–30 °C, 5–7 days |
| Candida albicans ATCC 10231         | Good growth, cream yeast colonies    | 25–30 °C, 48–72 h  |
| Saccharomyces cerevisiae ATCC 9763  | Good growth, creamy white colonies   | 25–30 °C, 48–72 h  |
| Escherichia coli ATCC 25922         | Inhibited or no growth (selectivity) | 25–30 °C, 48 h     |

## Storage & Stability

|                              |   |
|------------------------------|---|
| <b>Dehydrated powder</b>     | Store at 15–30 °C in a dry, tightly sealed container          |
| <b>Protection</b>            | Protect from moisture, direct light, and extreme temperatures |
| <b>Prepared plates/tubes</b> | Store at 2–8 °C in inverted position                          |
| <b>Shelf life (prepared)</b> | Use within 4 weeks of preparation                             |



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**Do not use if**

Contamination, clumping, or discolouration is observed

### Quality & Compliance

Manufactured under controlled conditions for batch-to-batch consistency. Performance tested against ATCC reference organisms prior to release. Compatible with APHA Standard Methods, ISO 21527, and AOAC guidelines for yeast and mould enumeration.

### Customs & Trade Information

**HS / AHECC Code**

3821.00.00

**Description**

Prepared culture media for the development or maintenance of microorganisms

**Country of Origin**

Australia

### Disclaimer

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