Instructions for Use

REF - BM1489 **Malt Extract Agar**

Bottled Media

1. Intended Use

For *in vitro* diagnostic use. BM1489 Malt Extract Agar is a general-purpose medium for the detection, isolation and enumeration of yeasts and moulds [(1)].

2. Composition*

Ingredient	g/L
Malt extract	30.0
Mycological peptone	5.0
Agar	15.0

*Adjusted/supplemented as needed to meet performance requirements

3. Summary and Explanation

Malt Extract Agar is recommended for the detection and isolation and enumeration of yeasts and moulds. Malt Extract Agar with or without the addition of selective agents (e.g., chloramphenicol or cycloheximide) can be used for isolation of yeast and fungi from clinical specimens.

The medium is also used in the testing of foods and various materials and for the cultivation of the strains for microbiological vitamin assays. Malt Extract Agar has been used to cultivate fungi and yeast cultures in the sugar industry, in the manufacturing of syrups, soft drinks, and foods.

4. Principle

Malt extract and mycological peptone supply the carbon, nitrogen and nutrient sources required by the organisms. The acidic pH of this medium allows for optimal growth of moulds and yeasts while restricting bacterial growth. Malt extract agar is used for the cultivation of fungi although, with the prolonged incubation times, cultures may become overgrown with bacteria. The selectivity of the medium can be increased by lowering the pH to 3.5-4.0, after sterilisation, with the addition of 10% Lactic acid or by the addition of selective agents such as chloramphenicol (E&O LS0050).

5. Physical Characteristics

	Appearance and Colour	pH
Medium	Pale brown firm gel	5.4 ± 0.2

6. Materials Provided

BM1489 Malt Extract Agar is available in packs of 10 x 200ml in 300ml bottles (product code: BM1489-A300-200). Each bottle is ink-jet printed or labelled with (abbreviated) product name, product code, lot number and expiry date.

7. Materials Needed but not Provided

Standard microbiological laboratory materials e.g., sterile loops or swabs, collection containers, incubators, and quality control organisms.

8. Specimens

BM1489 Malt Extract Agar is suitable for the testing of the following specimens:

- Clinical: Skin swabs taken from infected locations, skin scrapings and nail or hair samples.
- Food and Environmental: Foodstuffs, raw materials, syrups and environmental testing of surfaces and equipment

Sampling and transport equipment must be used in accordance with the end user's suppliers' recommendations. Refer to appropriate standard method or local guidance on sample collection and subsequent processing.

9. Test Procedures and Interpretation of results

Place bottles of agar in a boiling water bath or similar unit until it has entirely melted. Mix gently but thoroughly, and allow to cool to approximately 45°C, pour plates or dispense to required container and allow to set.

Clinical specimens:

Inoculate specimen directly onto the medium and streak across the agar surface using a sterile loop or automated plate streaker. Incubate at 25-30°C aerobically for up to 14 days.

Food and Environmental samples:

For solid samples, prepare a homogenised suspension using a ratio of 1:9 of sample to Maximum Recovery Diluent (E&O BM0760). With homogenised and liquid specimens, add 1ml into an empty dish, overlay with the medium, rotate the dish gently to mix, and allow to solidify completely. Incubate at 25 ± 1°C aerobically for 24-48 hours.

After incubation, examine agar for colonies (typical colony appearance outlined in Quality Control table below). Perform further biochemical, serological, molecular, or mass spectroscopy testing to confirm identity of presumptive positive isolates. Refer to relevant guidelines.

10. Quality Control

Organism	Incubation	Result (Specificity)
C. albicans (NCPF 3179)	25 ± 1°C aerobically for 24-48 hours	Growth: White colonies
S. cerevisiae (NCPF 3178)	25 ± 1°C aerobically for 24-48 hours	Growth: White colonies

It is the responsibility of the user to perform Quality Control testing taking into consideration the intended use of the medium and in agreement with any local relevant guidelines (e.g., frequency, strains used, atmosphere, incubation temperature).

11. Performance

To fully verify the performance of BM1489 Malt Extract Agar, samples were tested to assess colony morphology and recovery when they were inoculated with 30-150cfu for the target organisms then incubated at 25 ± 1°C aerobically for 24-48 hours. All samples showed good recovery and the correct morphology of the required test organisms: *Candida albicans* (NCPF 3179) and *Saccharomyces cerevisiae* (NCPF 3178). Therefore, it can be concluded that BM1489 Malt Extract Agar, meets performance criteria when used according to the instructions outlined above.

12. Limitations of the Medium

- Additional biochemical, serological, molecular, or mass spectrometry tests should be performed on sub-culture isolates to confirm identity.
- Due to natural variation, some strains may grow poorly on this medium.

13. Precautions and Warnings

This product is considered non-hazardous under CLP regulations. Wear such PPE as recommended by laboratory COSHH assessment. During and after use, always handle all materials in a manner conforming to Good Laboratory Practices and consider that material under test should be regarded as a potential biohazard if mishandled.

Refer to E&O BM1489 Bottled Media Material Safety Data Sheet.

14. Storage conditions and Shelf life

Store BM1489 in the original bottle with the lid tightly closed at between 2 and 30°C. Kept under these conditions it may be used up to date of expiry shown on product label.

Dispose of in accordance with local and national authority requirements. Do not use media if it is contaminated, discoloured or out of date. Additionally, do not use medium if it has been stored inappropriately or the packaging has been damaged.

15. References

1. Galloway, L. and Burgess, R. (1952) Applied Mycology and Bacteriology, Leonard Hill, London. Thom and Church, 1926. The Aspergilli.

Version History*

001 20/02/23 - New Document Created

*Note: minor typographical, grammatical, and formatting changes are not included in the revision history.

E&O Laboratories Ltd, Burnhouse, Bonnybridge, Scotland, FK4 2HH, Tel: +44 (0) 1324 840 404, info@eolabs.com, www.eolabs.com

EC REP Syntec Scientific Ltd., Unit 2 The Business Centre, Northwest logistics Park, Ballycoolin, Dublin 15, Ireland D1SPY00

TABLE OF APPLICABLE SYMBOLS

REF o REF Catalogue number	LOT Batch code	IVD *In vitro* Diagnostic Medical Device	Manufacturer	Use by
Temperature limitation	Contents sufficient for <n> tests	Consult Instructions for Use	Keep away from direct light	Store in a dry place