TECHNICAL DATA SHEET

AS-1287

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Malt Extract Broth

Liquid Fungal Culture Medium for Yeasts and Moulds

Document Control	Version 1.0 · Reviewed 17 September 2024
Technical Review	Hassan Salimi, Technical Director, AuSaMicS Pty Ltd (18+ years culture media formulation)

Product Identification

Product Name	Malt Extract Broth
Catalogue Number	AS-1287
HS Code	3821.00.00
Medium Type	Selective liquid culture medium
Format	Dehydrated powder
Manufacturer	AuSaMicS Pty Ltd, Melbourne, Australia

Intended Use

Liquid culture medium for the detection, isolation, and enumeration of fungi, particularly yeasts and filamentous moulds. Referenced in the FDA Bacteriological Analytical Manual (BAM Media M94) for sterility and spoilage-organism testing.

Mode of Action

Malt Extract supplies fermentable carbohydrates (predominantly maltose) as a readily available energy source, contributing to the medium's natural acidity. Mycological Peptone provides nitrogen, amino acids, and growth factors, supporting luxuriant fungal growth with typical morphology and pigmentation. The resulting slightly acidic pH (5.4 ± 0.2) favours yeast and mould growth while suppressing many, though not all, bacteria.

Formulation (per litre)

Ingredient	Quantity	Function
Malt Extract	17.0 g	Fermentable carbohydrate / energy source; contributes acidity
Mycological Peptone	3.0 g	Nitrogen, amino acids, growth factors

Total: 20.0 g/L **Final pH: 5.4 ± 0.2 at 25°C**

> *Formulation verified against Oxoid's published Typical Formula. Sterilise at 115°C for 10 minutes, not the standard 121°C/15min — this lower-temperature cycle is specific to malt-extract media and avoids caramelising the malt sugars, which would otherwise darken the medium and reduce fermentable-sugar availability.*

Preparation

- Suspend 20.0 g of dehydrated medium in 1 L demineralised water
- Heat with agitation until fully dissolved
- Sterilise by autoclaving at 115°C for 10 minutes
- Cool to room temperature
- Add selective agents (e.g., sterile 10% lactic acid, antibiotics) if required before use

Incubation Conditions

Parameter	Condition
Temperature	25°C
Time	Up to 5 days
Atmosphere	Aerobic

Quality Control — Cultural Response

Organism	ATCC No.	Expected Result
Aspergillus brasiliensis (niger)	16404	Good to luxuriant growth
Candida albicans	10231	Good growth
Saccharomyces cerevisiae	9763	Good growth
Escherichia coli	25922	Suppressed / limited growth

Malt Extract Broth vs Malt Extract Agar

Property	Malt Extract Broth (this product)	Malt Extract Agar
Physical form	Liquid	Solid (agar-solidified)
Typical use	Sterility testing, turbidimetric assays, liquid fungal cultivation	Colony isolation, morphological identification
Base composition	Malt Extract 17.0g + Mycological Peptone 3.0g	Malt Extract 30.0g + Mycological Peptone 5.0g + Agar 15.0g (typical)

Storage & Shelf Life

Dehydrated medium	15–30°C, dry, tightly sealed — 24 months

Prepared medium	2–8°C

Do not use if contamination, precipitation, or abnormal turbidity is observed.

Limitations & Technical Considerations

- Moderate, not absolute, bacterial suppression — some acid-tolerant or aciduric species can still grow.
- Sterilisation temperature matters — autoclaving at the standard 121°C/15min can darken the medium and alter performance.
- Not a solidified medium — for colony-based work, use Malt Extract Agar instead.

Literature & References

- U.S. Food and Drug Administration. Bacteriological Analytical Manual (BAM), Media M94: Malt Extract Broth.
- Oxoid Ltd. Malt Extract Broth — Typical Formula and preparation instructions, Thermo Fisher Scientific technical documentation.

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