

## Technical Information

### Malt Extract Broth, Modified as per Thom and Church

#### Product Code: DM 2128

**Application:** - Malt Extract Broth, modified as per Thom and Church is recommended for isolation, detection and enumeration of yeasts and moulds and to check sterility to detect presence of these organisms.

#### Composition\*\*

Ingredients	Gms / Litre
Malt extract	6.000
Maltose	1.800
Dextrose	6.000
Yeast extract	1.200
Final pH ( at 25°C)	4.7±0.2

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

Malt Extract medium is recommended for the isolation, and enumeration of yeasts and moulds.

Reddish <sup>(1)</sup> devised a medium prepared from malt extract which was an acceptable substitute for wort. Using the formula of Reddish, Thom and Church <sup>(2)</sup> were able to prepare the complete media using malt extract as a base.

Malt extract and yeast extract provide essential growth nutrients for the growth of fungi. Maltose and dextrose are the suitable carbohydrates for the growth of fungi. The low pH inhibits bacterial growth <sup>(3)</sup>.

Inoculate the specimen directly into tubes of the medium and incubate the tubes. After sufficient incubation observe for the presence of turbidity and subculture on selective and non-selective media for isolation of individual species. Consult appropriate references for information regarding the processing and inoculation of specimens <sup>(4)</sup>.

#### Methodology

Suspend 15 grams of powder media in 1000 ml distilled water. Shake well and heat Steam for 30 minutes. DO NOT AUTOCLAVE. Autoclaving is not required due to reduced water activity (Q w). Mix well and pour into sterile Petri plates.

#### Quality Control

##### Appearance

Cream to yellow homogeneous free flowing powder

##### Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent solution in tubes

##### Reaction

Reaction of 1.05% w/v aqueous solution at 25°C. pH : 4.7±0.2

##### pH Range

4.50-4.90

##### Cultural Response/Characteristics

DM 2128: Cultural characteristics observed after an incubation at 20-30°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth
*Aspergillus brasiliensis ATCC 16404	50-100	good - luxuriant
Candida albicans ATCC 10231	50-100	good - luxuriant
Saccharomyces cerevisiae ATCC 9763	50-100	good - luxuriant

\*Key: Formerly known as Aspergillus niger ATCC 16404

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

1. Reddish, 1919, Abst. Bact., 3:6.
2. Thom and Church, 1926, The Aspergilli.
3. Lennett, Balows, Hausler and Shadomy (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C.
4. Ajello L., Georg L. K., Kaplan W. and Kaufman L., 1963, CDC Laboratory Manual for Medical Mycology, Washington, D. C.

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