Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Yeast Malt Broth

Product Code: DM 1425

Application: - Yeast Malt Broth (YM Broth) is used for the isolation and cultivation of yeasts, moulds and other aciduric microorganisms.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Yeast extract	3.000
Malt extract	3.000
Dextrose	10.000
Final pH (at 25°C)	6.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Yeast Malt Broth is formulated by Wickerham [1, 2] for isolation and cultivation of yeasts, moulds and other aciduric microorganisms. Fungistatic materials such as sodium propionate and diphenyl are added to YM Broth to eliminatet the growth of moulds and thus permit enumeration of yeasts from mixed population.

Wickerham suggested the use of Yeast Malt Broth as an enrichment medium for yeasts by adding a layer of sterile paraffin oil (about 1 cm) on the surface of inoculated broth. After the growth occurs it should be streaked on YM Agar (DM1424) to obtain isolated colonies of fermentative species. To isolate fermentative as well as oxidative strains, acidified YM Broth is placed on a rotary shaker for 1 or 2 days which favours development of yeast cells while the sporulation of moulds is prevented and yeasts can be isolated by streaking on YM Agar (DM1424).

Peptic digest of animal tissue act as a source of carbon, nitrogen and essential nutrients. Yeast extracts supplies vitamin B complex nutrients and other growth factors. Malt extract serves as an additional source of carbon. Dextrose is the carbohydrate and energy source. To increase the selectivity, the media can be acidified by the addition of sterile 10% HCl, tartaric acid or 10% citric acid. Alternatively antibiotics (penicillin 20U/ml or streptomycin to a final concentration of 40mcg/ml) can be added. Acidified medium should not be reheated.

Methodology

Suspend 10.5 grams of powder media in 490 ml distilled water. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For preparing selective media acidify the media upto pH 3.0 to 4.0 by aseptically adding 1 vial of 10% Lactic Acid solution (MS2095) or add antibiotics. DO NOT HEAT the media after addition of acid or antibiotics. Mix well and dispense as desired.

Quality Control

Physical Appearance

Cream to beige homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear solution in tubes.

Reaction
Reaction of 2.1% w/v aqueous solution at 25^{0}C. pH: 6.2±0.2

pH Range 6.00-6.40

Cultural Response/Characteristics
DM 1425: Cultural characteristics observed after an incubation at 25-30°C for 40-72 hours.

Organism	Growth at pH 3.4	Growth at pH 6.2
*Aspergillus brasiliensis ATCC 16404	good-luxuriant	good-luxuriant
Candida albi cans ATCC 10231	good-luxuriant	good-luxuriant
Escherichia coli ATCC 25922	Inhibited	good-luxuriant
Lactobacillus leichmannii ATCC 4797	poor	good-luxuriant
Saccharomyces cerevisiae ATCC 9763	good-luxuriant	good-luxuriant
Lactobacillus casei ATCC 9595	poor	good-luxuriant

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: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Wickerham, 1939, J. Tropical Med. Hyg., 42:176.
2. Wickerham, 1951, U.S. Dept. Agric. Tech. Bull. No. 1029.

Disclaimer :

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