MY 40 Agar (Osmophilic Agar)

M594

MY 40 Agar (Osmophilic Agar) is used for detection and isolation of osmophilic microorganisms from food samples.

Composition**

Ingredients	Gms / Litre
Malt extract	20.000
Yeast extract	5.000
Sucrose	400.000
Agar	20.000

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 44.5 grams in 100 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. DO NOT OVERHEAT. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Osmophilic yeasts usually are the cause of spoilage of high-sugar foods, including jams, honey, concentrated fruit juices, chocolate candy with soft centres etc. (1, 2). Osmophilic yeasts are of no public health significance, but are of economic importance to the food industry (2). A simple presence-absence test for detection of small numbers of osmotolerant yeasts in high-sugar foods is useful for enumeration. Osmophilic Agar (MY 40 Agar) is generally used for this purpose. Walker and Ayers (3) in their review have differentiated between osmophilic yeasts and osmoduric yeasts. Almost all of the known osmophilic yeasts are *Saccharomyces* species e.g. *Saccharomyces rouxii, var. polymorphus, Saccharomyces mellis* etc. Improved recovery of osmophillic yeasts has been reported on media, which resemble the composition of the food under examination or contain high sugar concentrations (4).

Osmophilic Agar is recommended for cultivation of a wide variety of osmophilic organisms (5). MY in MY-40 Agar stands for malt extract and yeast extract and 40 for the 40% of sucrose in the medium, which meets the above requirements.

The medium contains malt extract and yeast extract which supply the nitrogenous nutrients, amino acids, vitamins, trace ingredients to the osmophilic yeasts. 40% sucrose in the medium satisfy the nutritional need of these yeasts.

Quality Control

Appearance

Off-white to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Medium amber coloured slightly opalescent gel forms in Petri plates

Cultural Response

M594: Cultural characteristics observed after an incubation at 25-30°C for upto 1 week.

Organism	Growth Cultural Response
**Aspergillus brasiliensis ATCC 16404*	good-luxuriant
Mucor racemosus ATCC 22365	good-luxuriant
Pencillium notatum ATCC 10108	good-luxuriant
Saccharomyces rouxii ATCC 28253	good-luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Rose A. H. and Harrison J. S., (Eds.), 1970, The Yeasts, Vol. 3, Academic Press, New York.
2. Tilbury R. H., 1980, "Biology and Activities of Yeasts", Skinner and others (Ed.), Academic Press, London.
3. Walker H.W., and Ayers J.C., 1970, Jn. A.H. Rose and J.S. Harrison (Eds.), `The Yeasts', Vol. 3, Academic Press, Inc., New York.
4. Anand J.C. and Brown A.D., 1968, J. Gen. Microbiol., 52:205.
5. Atlas R. M., 2004, Handbook of Microbiological Media, Lawrence C. Parks (Ed.), 3rd Edition, CRC Press.

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