YXT Agar Base

M957

YXT Agar Base with or without added tetracycline is used for detecting yeasts and moulds from foods.

Composition**

Ingredients	Gms / Litre
Yeast extract	4.000
Glucose	4.000
Malt extract	10.000
Agar	15.000

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 33 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add filter sterilized tetracycline at a final concentration of 10 mcg/ml of medium. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Yeasts are unicellular, eukaryotic, budding cells that are generally round oval or elongate in shape (1). They multiply principally by the production of blastoconidia (buds) (1). Yeast colonies are moist and creamy or glabrous to membranous in texture and are considered opportunistic pathogens. Moulds are microscopic, plant-like organisms, composed of long filaments called hyphae. Both are widely distributed in soil, water and air. Consequently, unprocessed materials of both plant and animal origin are contaminated with fungi at the time they reach the food manufacturer. The detection and enumeration of viable yeasts and moulds in unprocessed and processed foods is an integral part of total quality management programs, and can be used to monitor the effectiveness of sanitation practices at each step during post-harvest and post-slaughter handling, processing and distribution of foods (2). YXT Agar Base is formulated as recommended in APHA for detecting yeasts and moulds from foods (4).In this medium, yeast extract and malt extract serve as inorganic nitrogen source and a source of other growth factors, while dextrose serves as carbon and energy source. Tetracycline is added for the improved, selective isolation and enumeration of yeasts and moulds from foods (3).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured opalescent gel with flocculant precipitate forms in Petri plates.

Cultural Response

M957: Cultural characteristics observed after an incubation at 25-30°C for 24-72 hours with added Tetracycline at a final concentration of 10mcg/ml.

Organism	Inoculum (CFU)	Growth	Recovery
**Aspergillus brasiliensis* ATCC 16404	50-100	good-luxuriant	-
Candida albicans ATCC 10231	50-100	good-luxuriant	>=50%
Pencillium notatum ATCC 10108	50-100	good-luxuriant	-
Saccharomyces cerevisiae ATCC 9763	50-100	good-luxuriant	>=50%

*Key: formerly known as *Aspergillus niger*

Storage and Shelf Life

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

Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.). 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Corry J. E. L., Curtis G. D. W., and Baird R. M., (Eds.), Culture Media for Food Microbiology, Vol. 34, Progress in Industrial Microbiology, 1995, Elsevier, Amsterdam.
3. Cooke, 1954, Antibio. and Chemother., 4:657.
4. Speck M. L., (Eds.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd Ed., APHA, Washington, D.C.

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