

Technical Information

Orange Serum MiVeg Agar

Product Code : VM1933

Application:- Orange Serum MiVeg Agar is recommended for cultivation and enumeration of microorganisms associated with the spoilage of citrus products, cultivation of *Lactobacilli*, other aciduric organisms and pathogenic

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	10.00
Yeast extract	3.00
Dextrose	4.00
Dipotassium phosphate	2.50
Orange serum (solids from 200 ml)	9.00
Agar	17.00
Final pH (at 25°C)	5.5±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Orange Serum MiVeg Agar is prepared by using MiVeg hydrolysate in place of casein enzymic hydrolysate thus the medium becomes free from BSE/TSE risks. Orange Serum Agar was originally developed by Murdock et al (1) and Hays (2) for examining citrus concentrates. Hays and Reister further used this medium for studying spoilage of orange juice (3). The medium is most productive for the growth of spoilage organisms. Dehydrated agar medium containing orange serum was reported by Stevens (4) and this medium is recommended by APHA (5). This medium is the modification of Orange serum Agar and serves the same purpose. It contains MiVeg hydrolysate and yeast extract which supplies essential nitrogenous nutrients. Dextrose serves as the energy source. Orange serum provides an optimal environment for the recovery of acid tolerant microorganisms from citrus fruit products.

Methodology

Suspend 45.5 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID OVERHEATING.

Quality Control

Physical Appearance

Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.7% Agar gel

Colour and Clarity of prepared medium

Medium to dark amber coloured. Clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.55 % w/v aqueous solution pH: 5.5 ±0.2 at 25°C

pH range

5.3-5.7

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours

Organisms (ATCC)

**Aspergillus niger* (16404)

Lactobacillus fermentum (9338)

Growth

good-luxuriant

good-luxuriant

Lactobacillus acidophilus (4356) good-luxuriant

Leuconostoc mesenteroides (12291) good-luxuriant

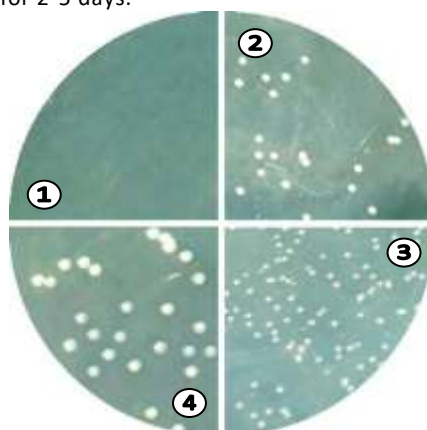
Saccharomyces cerevisiae (9763) good-luxuriant

Key: * = Incubated at 25-30°C.

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.



VM1933 Orange Serum MiVeg Agar
(Against dark background)

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|-----------------------------------|-------------------------------------|
| 1. Control | 3. <i>Leuconostoc mesenteroides</i> |
| 2. <i>Lactobacillus fermentum</i> | 4. <i>Saccharomyces cerevisiae</i> |

Further Reading

1. Murdock, Folinazzo and Troy, 1951, Food Technol., 6:181.
2. Hays, 1951, Proc. Florida State Soc., 54:135.
3. Hays and Reister, 1952, Food Technol., 6:186.
4. Stevens, 1954, Food Technol., 8:88.
5. Downes FP and Ito K (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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