Pantothenate Inoculum Broth

M542

Pantothenate Inoculum Broth is recommended for the preparation of inoculum used in microbiological assays of pantothenic acid or its salts.

Composition**

Ingredients	Gms / Litre
Peptonized milk	15.000
Yeast extract	5.000
Dextrose	10.000
Monopotassium phosphate	2.000
Tomato juice (100 ml)	5.000
Polysorbate 80	1.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 38 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Distribute in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Pantothenate Inoculum Broth is prepared based on the formula originally designed by Kulp and White (1) and later on modified and recommended by AOAC (2) for cultivating Lactobacilli used in microbiological assays. Kulp and White developed this medium for plating *Lactobacillus acidophilus* and obtained high recovery of Lactobacilli (1).

Peptonized milk contains lactose, which serves as the energy source for Lactobacilli. Dextrose serves as the fermentable carbohydrate and/or energy source. Yeast extract and peptone (of peptonized milk) provide vitamin B complex, nitrogenous compounds and trace ingredients for the growth. Tomato juice provides an acid environment in the medium resulting in inhibition of microorganisms other than acidophilic bacteria. Polysorbate 80 supplies fatty acids required for the metabolism of Lactobacilli.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Medium amber coloured clear solution, without any precipitate.

Reaction

Reaction of 3.8% w/v aqueous solution at 25°C. pH : 6.8±0.2

Cultural Response

M542: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Lactobacillus casei ATCC 9595	50-100	luxuriant
Lactobacillus leichmannii ATCC 4797	50-100	luxuriant
Lactobacillus plantarum ATCC 8014	50-100	luxuriant
Lactobacillus acidophilus ATC 11506	50-100	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. Kulp J. W. L. and White V., 1932, Science, 76:17.
2. Cunniff P., (Ed.), 1995, Official Methods of Analysis of AOAC International, 16th Ed., Vol. II, AOAC, Arlington, Virginia.

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