Universal Liquid Medium

M1332

This medium is generally used in the brewing industry for the cultivation of brewery bacteria, including beer spoilage forms in the brewing industry

Composition**

Ingredients	Gms / Litre
Peptonized milk	15.000
Yeast extract	6.100
Dextrose	16.100
Tomato juice	12.100
Dipotassium phosphate	0.300
Monopotassium phosphate	0.300
Magnesium sulphate	0.100
Sodium chloride	0.006
Ferrous sulphate	0.006
Manganese sulphate	0.006
Cycloheximide	0.005
Final pH (at 25°C)	6.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 50.02 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes. The sterile medium should be stored in the dark at room temperature. Examine any surface film or pellicle microscopically for aerobic bacteria.

Principle And Interpretation

Universal Liquid Medium, Modified is used for cultivation of brewing bacteria. It is a modification of Universal Beer Agar developed as per Kozulis and Page (1). Cycloheximide suppresses certain yeasts.

Yeast extract is a source of trace elements, vitamins and amino acids. Peptonized milk contains lactose as an energy source. Tomato juice is a source of carbon, protein and nutrients. Dextrose provides additional carbon. Dipotassium and monopotassium phosphates provide buffering capability. Magnesium sulphate, ferrous sulphate and manganese sulphate are sources of ions that simulate metabolism. Sodium chloride maintains the osmotic equilibrium.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Medium amber coloured clear solution in tubes

Reaction
Reaction of 5.0% w/v aqueous solution at 25°C. pH : 6.3±0.2

pH
6.10-6.50

Cultural Response
M1332: Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response		
Acinetobacter baumannii ATCC 19606	50-100	good-luxuriant
Lactobacillus acidophilus ATCC 4356	50-100	good-luxuriant

Lactobacillus fermentum ATCC 9338	50-100	good-luxuriant
Proteus vulgaris ATCC 13315	50-100	fair-good
Saccharomyces cerivisiae ATCC 9763	>=10^3	inhibited

Storage and Shelf Life

Store below 8°C in tightly closed container .Use before expiry date on the label.

Reference

1. Kozulis J. A. and Page H. E., 1968, Proc. Am. Soc. Brew. Chem., 52:58.

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