

## TM 1629 - UNIVERSAL LIQUID MEDIUM

### INTENDED USE

For cultivation of bacteria in brewery.

### PRODUCT SUMMARY AND EXPLANATION

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. Cycloheximide suppresses certain yeasts.

### COMPOSITION

Ingredients	Gms / Ltr
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

### PRINCIPLE

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.

### INSTRUCTION FOR USE

- Dissolve 50.02 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi 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.

### QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Cream to yellow homogeneous free flowing powder..  
**Appearance of prepared medium** : Medium amber coloured clear solution in tubes.  
**pH (at 25°C)** : 6.3±0.2

### INTERPRETATION

Cultural characteristics after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Acinetobacter baumannii</i>	19606	50-100	Good-luxuriant	35-37°C	40-48 Hours
<i>Lactobacillus acidophilus</i>	4356	50-100	Good-luxuriant	35-37°C	40-48 Hours
<i>Lactobacillus fermentum</i>	9338	50-100	Good-luxuriant	35-37°C	40-48 Hours
<i>Proteus vulgaris</i>	13315	50-100	Fair-good	35-37°C	40-48 Hours
<i>Saccharomyces cerevisiae</i>	9763	$\geq 10^3$	Inhibited	35-37°C	40-48 Hours

#### PACKAGING:

In pack size of 500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

#### DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

#### REFERENCES

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

 Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
**Revision: 08 Nov., 2019**