TM 1628 - UNIVERSAL BEER AGAR (UB AGAR)

INTENDED USE

For culturing microorganisms having significance in brewing industry.

PRODUCT SUMMARY AND EXPLANATION

Kozulis and Page developed Universal Beer Agar Medium, a basal medium to which beer is added. This medium, used for detecting microbial contamination, has conditions found in typical brewery products and thus helps in growth of most variants of lactic acid bacteria. Universal Beer Agar supports the growth of *Lactobacilli, Pediococci, Acetobacter, Lymomonas* species and wild yeast strains which may be found infecting the pitching yeast, the cooled wort or during fermentation or storage of the finished beer. Due to the presence of beer in these media, it is selective for growth of microorganisms that have adapted themselves to the existent conditions in the brewery. The presence of hop constituents and alcohol inhibits growth of many airborne microorganisms not adapted to this environment.

COMPOSITION

Ingredients	Gms / Ltr
Peptonized milk	15.000
Yeast extract	6.100
Dextrose	16.100
Tomato juice	12.200
Dipotassium phosphate	0.310
Monopotassium phosphate	0.310
Magnesium sulphate	0.120
Sodium chloride	0.006
Ferrous sulphate	0.006
Manganese sulphate	0.006
Agar	12.000

PRINCIPLE

The medium consists of Yeast extract that 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 The presence of spoilage microorganisms in pitching yeast may be detected from diluted samples by direct surface plating or by pour plate techniques. Incubate the plates aerobically and anaerobically.

INSTRUCTION FOR USE

- Dissolve 62.158 grams in 750 ml of distilled water.
- Heat to boiling to dissolve the medium completely.
- Add 250 ml beer, without degassing, to the hot medium and mix gently. Dispense as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 10 minutes.
- If required, add 1 mcg/ml of Cycloheximide to sterile medium prior to dispensing.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder
Appearance of prepared medium : Medium amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 6.3±0.2

INTERPRETATION

Cultural characteristics observed after an incubation with added cycloheximide.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Acinetobacter calcoaceticus	23055	50 -100	Good-luxuriant	>=50%	35-37°C	40-48 Hours
Lactobacillus acidophilus	4356	50 -100	Good-luxuriant	>=50%	35-37°C	40-48 Hours
Lactobacillus fermentum	9338	50 -100	Good-luxuriant	>=50%	35-37°C	40-48 Hours
Proteus vulgaris	13315	50 -100	Fair-good	20 -30 %	35-37°C	40-48 Hours
Pediococcus acidilacti	8081	50 -100	Good-luxuriant	>=50%	35-37°C	40-48 Hours
Lactobacillus johnsonii	11506	50 -100	Good-luxuriant	>=50%	35-37°C	40-48 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

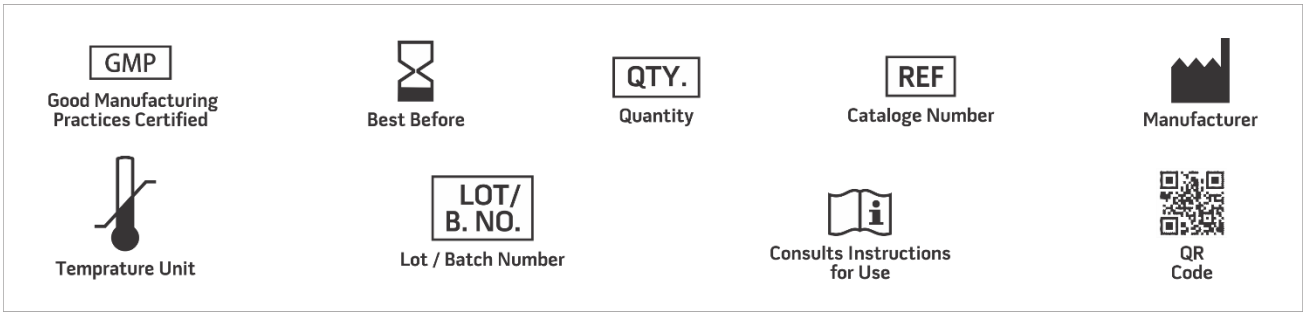
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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.
2. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.



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

***For Lab Use Only**

Revision: 08 Nov., 2019