TM 753 – RAKA RAY NO. 3 BROTH BASE (LACTIC ACID BACTERIA SELECTIVE BROTH BASE)

INTENDED USE

For selective isolation of lactic acid bacteria from brewery.

PRODUCT SUMMARY AND EXPLANATION

Lactic Acid Bacteria Selective Medium was formulated by Saha, Sondag and Middlekauff to monitor the brewing process and analyze it for a wide range of bacteria. These media are also recommended by the American Society of Brewing Chemists (ASBC) and the European Brewing Convention (EBC). Lactic Acid Bacteria Selective Medium was found to be superior to several other media for the cultivation of Lactobacilli and Pediococci. Lactic Acid Bacteria Selective Broth Base also suppressed the growth of non-lactic acid facultative bacteria that are often associated with lactic beer spoilage.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	20.000
Yeast extract	5.000
Liver extract	1.000
Maltose	10.000
Fructose	5.000
Dextrose (Glucose)	5.000
Betaine hydrochloride	2.000
Diammonium hydrogen citrate	2.000
L-Aspartic acid	2.500
Magnesium sulphate	0.980
Manganese sulphate	0.420
Dipotassium hydrogen phosphate	2.000
N-acetyl glucosamine	0.500
Potassium glutamate	2.500

PRINCIPLE

This medium consists of Yeast extract, tryptone and Liver extract serve as sources of carbon, nitrogen, vitamins, amino acids and essential nutrients. Dextrose (glucose), maltose and fructose serve as sources of carbon and energy. Fructose is an essential carbohydrate for the growth for Lactobacillus fructivorans. Maltose helps to detect glucose non-fermenting lactobacilli. Polysorbate 80, maltose, yeast extract and N-acetyl glucosamine stimulates growth of lactobacilli. Various salts provide trace elements. Cycloheximide and phenyl ethanol serves to inhibit yeast and gram-negative organisms respectively.

INSTRUCTION FOR USE

- Dissolve 29.45 grams in 500 ml purified/distilled water containing 5 ml Polysorbate 80.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Lactic Supplement.
- Mix well and dispense into sterile tubes or flasks as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to beige homogeneous free flowing powder.
Appearance of prepared medium : Dark amber coloured clear solution in tubes.
pH (at 25°C) : 5.4 ± 0.2

INTERPRETATION

Cultural characteristics observed under anaerobic condition, with added Lactic Supplement after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Lactobacillus acidophilus	11506	50-100	Good-luxuriant	25-30°C	18-48 Hours
Lactobacillus plantarum	8014	50-100	Good-luxuriant	25-30°C	18-48 Hours
Lactobacillus fermentans	9338	50-100	Good-luxuriant	25-30°C	18-48 Hours
Lactobacillus brevis	367	50-100	Good-luxuriant	25-30°C	18-48 Hours
Lactobacillus buchneri	11307	50-100	Good-luxuriant	25-30°C	18-48 Hours
Pedicoccus acidilactis	8042	50-100	Good-luxuriant	25-30°C	18-48 Hours
Escherichia coli	25922	>=10^4	Inhibited	25-30°C	18-48 Hours
Saccharomyces cerevisiae	9763	>=10^4	Inhibited	25-30°C	18-48 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
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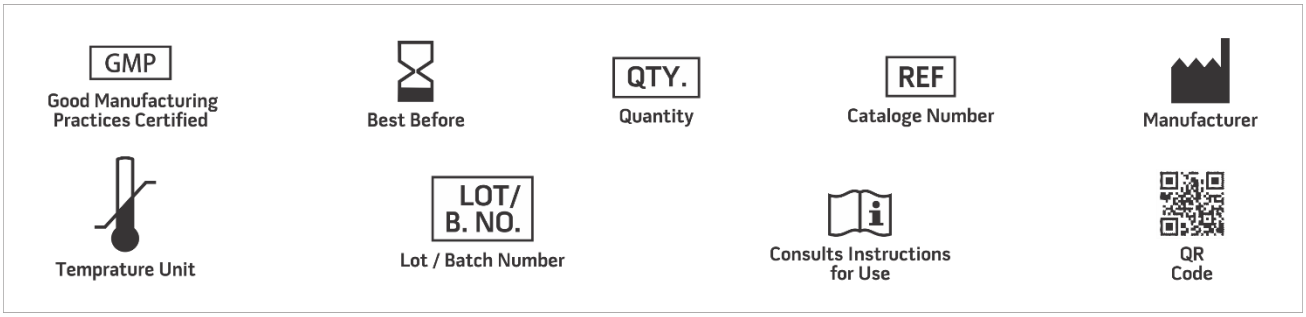
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
6. Lawrence D. R. and Leedham P. A., 1979, J. Inst. Brewing, 85. 119.



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