TM 2081 – FLUID LACTOSE MEDIUM

INTENDED USE

As a pre-enrichment medium for the detection of coliform bacteria in water, dairy products and food samples.

PRODUCT SUMMARY AND EXPLANATION

Coliforms are rod shaped gram-negative organisms that ferment lactose with the production of acid and gas. They are regarded as bacterial indicators of sanitary quality of foods and water. *Salmonella* is a rod shaped gram-negative enterobacteria commonly implicated in foodborne illness. These bacteria are present in low numbers in food and other products and also may be in a stressed condition. Before subjecting them to selective enrichment, for maximum recovery a pre-enrichment is necessary. Also, the presence of non-coliform bacteria and substances indigenous to the sample may interfere with the growth and recovery of coliforms. Therefore, pre-enrichment in a non-selective medium facilitates detection of sub-lethally injured cells.

Fluid Lactose Medium is a pre-enrichment medium, recommended by APHA, for the detection of coliform bacteria in water, dairy products and food samples. When competing lactose utilizing bacteria are present in the test sample, a resulting drop in pH generates a bacteriostatic effect on the competing microflora. It is also used in the performance of test for *Salmonella* species and *Escherichia coli*.

COMPOSITION

Ingredients	Gms / Ltr
Gelatin peptone	5.000
Beef extract	3.000
Lactose	5.000

PRINCIPLE

The medium consists of Beef extract and gelatin peptone which provide essential nutrients for bacterial metabolism. Lactose is the sole source of fermentable carbohydrate. Growth with gas formation is a presumptive test for coliforms. Whenever there is larger inoculum microbial limit multiple strength lactose broth is used.

INSTRUCTION FOR USE

- Dissolve 13.0 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Mix well and distribute into tubes with inverted Durham's tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Light amber coloured, clear solution without any precipitate.

pH (at 25°C) : 6.9 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

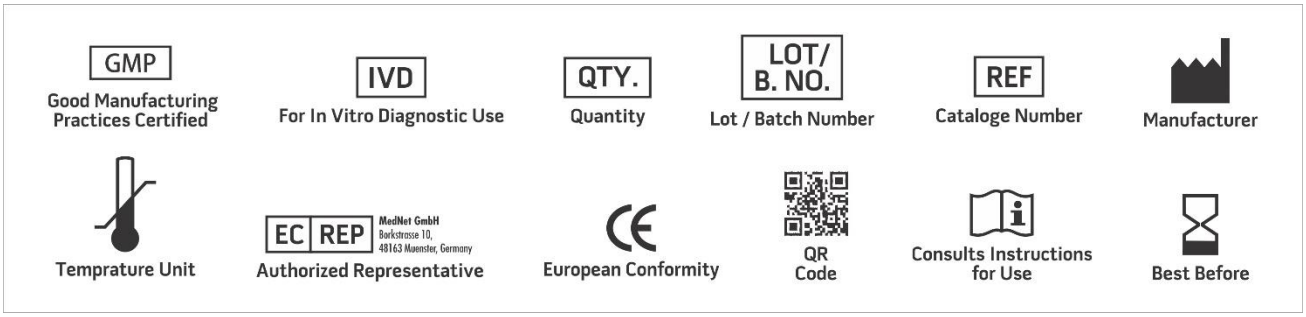
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Gas	Incubation Temperature	Incubation Period
Klebsiella aerogenes	13048	50-100	Good-luxuriant	Positive reaction	35-37°C	18-48 Hours
Escherichia coli	25922	50-100	Good-luxuriant	Positive reaction	35-37°C	18-48 Hours
Enterococcus faecalis	29212	50-100	Good-luxuriant	Negative reaction	35-37°C	18-48 Hours
Pseudomonas aeruginosa	27853	50-100	Good-luxuriant	Negative reaction	35-37°C	18-48 Hours

PACKAGING:
In pack size of 100 gm and 500 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. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
3. 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.
4. Marshall R. T., (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th Ed., APHA, N.Y.
5. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.



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

***For Lab Use Only**

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