TM 1108 – TRYPTONE LACTOSE IRON AGAR

INTENDED USE
For identification of anaerobes on the basis of motility,H2S production and lactose fermentation.

PRODUCT SUMMARY AND EXPLANATION
Tryptone Agar was developed by Vera for the accurate differentiation and identification of aerobes and anaerobes by means of motility and fermentation reactions. Tryptone Lactose Iron Agar medium is recommended to study motility of organism and simultaneous sulphite reduction in acidic environment. Due to presence of phenol red in the medium, on fermentation of lactose the medium turns yellow due to production of acid and gas. The ability of an organism to produce H2S is a consistent characteristics and an H2S producer usually produce gas (CO2 + H2) in carbohydrate media which is visualized as air bubbles in the medium.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	20.000
Lactose	10.000
Agar	3.500
Sodium sulphite	0.400
Ferrous sulphate	0.200
Sodium thiosulphate	0.080
Phenol red	0.020

PRINCIPLE
Casein enzymic hydrolysate provides essential growth nutrients to support the growth of organisms. Phenol red is the pH indicator. Even small amount of agar renders it suitable for study of motility. Small amounts of acid produced do not readily get dispersed throughout the medium and hence positive reaction can be more quickly determined in this medium than in liquid medium. Lactose is the fermentable carbohydrate. H2S production takes place in the presence of R1-SH group provided by cystine present in casein enzymic hydrolysate or through reduction of an inorganic sulphur source such as thiosulphate. H2S is a colourless gas, which upon contact with ferrous salt produces ferrous sulphide, a black precipitate indicated by a visible black reaction. Sodium sulphite at a concentration less than 0.05% is not inhibitory to *Clostridium sporogenes*.

INSTRUCTION FOR USE
- Dissolve 34.2 grams in 1000 ml distilled water.
- Heat boiling to dissolve the medium completely. Dispense in test tubes.
- Sterilize by autoclaving at * 118°C for 15 minutes. * -corresponds to 12lbs pressure.
- Cool the tubes in an upright position.

QUALITY CONTROL SPECIFICATIONS
Appearance of dehydrated medium : Light yellow to light pink homogeneous free flowing powder

Appearance of prepared medium : Red coloured clear to slightly opalescent gel forms in tubes as butts.

pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid	H2S	Motility	Incubation Temperature	Incubation Period
Clostridium perfringens	13124	50-100	Luxuriant	positive reaction, yellow colour	positive, blackening of medium	positive, growth away from stabline causing turbidity	35-37°C	18-48 hours
Clostridium sporogenes	11437	50-100	Luxuriant	positive reaction, yellow colour	negative, no blackening of medium	positive, growth away from stabline causing turbidity	35-37°C	18-48 hours

PACKAGING:

In pack size of 500 gm bottle.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 10-25°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.

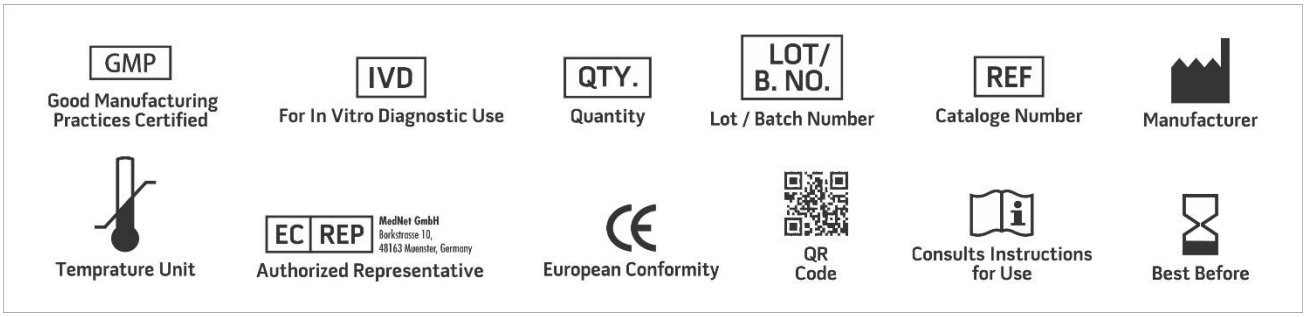
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1.Vera, 1944, J. Bacteriol., 47:455.
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3. Clarke P. H. and Cowen S. T., 1952, J. Gen. Microbiol., 6:187.
4. Fieser L. F. ad Fieser M., 1956, Organic Chemistry, 3rd Ed., New York Reinhold Publishing Corporation. pg 155.
5. Doelle H. W., 1969, Bacterial Metabolism, New York, Academic Press, p. 99, 224
6. Padron A. P. and Dockstader W. B., 1972, Appl. Microbiol., 23:1107.
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NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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