TM 1191 - GASSNER LACTOSE AGAR

INTENDED USE

For detection and isolation of pathogenic *Enterobacteriaceae* from foodstuffs.

PRODUCT SUMMARY AND EXPLANATION

Gram-negative bacilli belonging to *Enterobacteriaceae* are widely dispersed in nature and have been frequently isolated from clinical specimens. The genera in *Enterobacteriaceae* include pathogens such as *Salmonella, Shigella, Yersinia,* diarrheogenic *E.coli* and others. Definitive identification of members of *Enterobacteriaceae* may require a battery of biochemical tests. Differentiation of the *Enterobacteriaceae* however is based primarily on the presence or absence of different enzymes coded by the genetic material possessed. These enzymes direct the metabolism of bacteria along one of several pathways that can be detected in vitro. Substrates on which these enzymes can react are incorporated into the culture medium together with an indicator that can detect either utilization of the substrate or the formation of specific metabolic products.

Gassner Lactose Agar was originally developed by Gassner for the detection and isolation of pathogenic *Enterobacteriaceae* from food and other materials. This medium has been prescribed in the regulations for the execution of the German Meat Inspection Law (Deutsches Fleischbeschaugesetz).

COMPOSITION

Ingredients	Gms / Ltr
Meat peptone	7.000
Sodium chloride	5.000
Lactose	50.000
Metachrome yellow	1.250
Water blue	0.625
Agar	13.000

PRINCIPLE

This medium is also known as Water-blue Metachrome-Yellow Lactose Agar. Metachrome-yellow primarily inhibits gram-positive microorganisms present in the food materials. Lactose fermenters produce acid, indicated by the water blue indicator, which turns blue in acidic range and colourless in the alkaline range. Original colour of the prepared medium is green, but in the acidic pH it becomes blue-green to blue while in the alkaline conditions the yellow colour of metachrome yellow becomes increasingly apparent. Medium ingredients like HM peptone provide essential nutrients and sodium chloride maintains osmotic balance respectively.

INSTRUCTION FOR USE

- Dissolve 76.87 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to green homogeneous free flowing powder.

Appearance of prepared medium : Dark green coloured, clear to slightly opalescent gel forms in Petri plates.

pH (at 25°C) : 7.2±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Colour change of medium	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	>=10^4	Inhibited	0%	-	-	35-37°C	18 - 48 Hours
Escherichia coli	25922	50-100	Good-luxuriant	>=50%	Dark green	Blue	35-37°C	18 - 48 Hours
Klebsiella pneumoniae	13883	50-100	Good-luxuriant	>=50%	Mucoid green	Blue	35-37°C	18 - 48 Hours
Proteus mirabilis	25933	50-100	Good-luxuriant	>=50%	Yellowish green	Yellow	35-37°C	18 - 48 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	>=50%	Yellow	Yellow	35-37°C	18 - 48 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	>=50%	Yellow	Yellow	35-37°C	18 - 48 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	>=50%	Yellow	Yellow	35-37°C	18 - 48 Hours
Shigella flexneri	12022	50-100	Good-luxuriant	>=50%	Yellow	Yellow	35-37°C	18 - 48 Hours
Staphylococcus aureus subsp. *aureus*	25923	>=10^4	Inhibited	0%	-	-	35-37°C	18 - 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 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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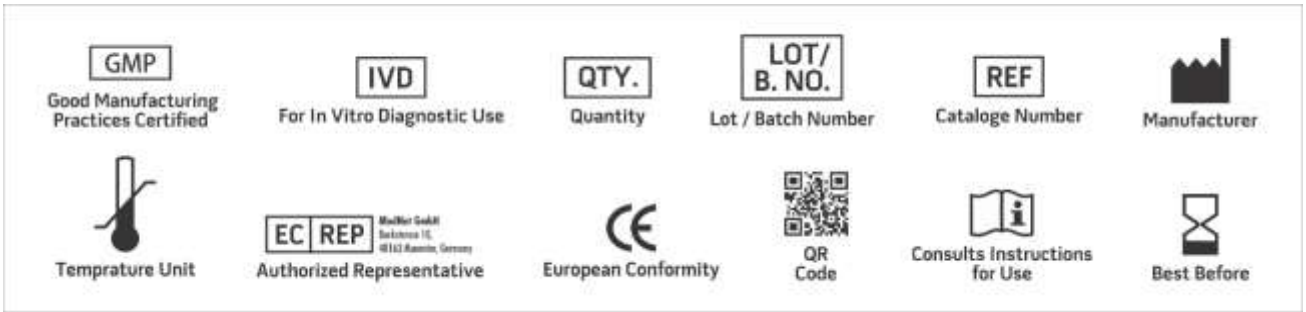

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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