TM 1221 – LIPOVITELLIN SALT MANNITOL AGAR BASE

INTENDED USE

For selective isolation and identification of Staphylococci on the basis of lipase production and mannitol fermentation from clinical and non-clinical specimens

PRODUCT SUMMARY AND EXPLANATION

The coagulase-positive species of *Staphylococcus* i.e. *Staphylococcus aureus* is well-documented as a human opportunistic pathogen. *S.aureus* is also isolated from recreational water like swimming pools, and are thus indicators of health risk. *S.aureus* is relatively resistant to the effect of disinfectant like chlorine and sodium chloride.
Lipovitellin Salt Mannitol Agar Base, recommended by APHA is used for the selective isolation and identification of pathogenic *S.aureus* by detecting lipase production and mannitol fermentation.

COMPOSITION

Ingredients	Gms / Ltr
Beef extract	1.000
Peptone, special	10.000
Sodium chloride	75.000
D-Mannitol	10.000
Phenol red	0.025
Agar	15.000

PRINCIPLE

This medium consists of Beef extract and peptone special which serve as source of nitrogenous and carbonaceous compounds, long chain amino acids vitamins and other essential nutrients required for bacterial growth. Sodium chloride in higher concentration makes the medium selective for Staphylococcus by inhibiting accompanying flora. D-Mannitol is the fermentable carbohydrate, fermentation of which leads to acid production, detected by the pH indicator dye, namely phenol red. Lipovitellin is a lipo phosphoprotein, which is combined with lecithin in the yolk of eggs. It is also known as vitellin or ovovitellin and is inhibitory to majority of bacteria except Staphylococcus. Egg yolk emulsion serves as a source of lipids for lipase activity. Inoculate tubes of M-Staphylococcus Broth. Incubate at 35-37°C for 24 hours. Streak plates of Lipovitellin Salt Mannitol Agar Base with a loopful of culture from positive (turbid) tubes. Incubate at 35-37°C for 24-48 hours. Opaque, yellow zones around the colonies are positive evidence of Lipovitellin + lipase activity (opaque) and mannitol fermentation.

INSTRUCTION FOR USE

- Dissolve 11.1 grams in 93 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 and aseptically add 7 ml of sterile Egg Yolk Emulsion to get a final concentration of 2%.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

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

Appearance of prepared medium : Basal medium : Red coloured clear to slightly opalescent gel After addition of 2% Egg Yolk Emulsion :Pink coloured opaque forms in Petri plates.

pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed with added egg yolk emulsion after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Lipase activity	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. aureus	25923	50-100	Good-luxuriant	>=50%	Yellow colonies with yellow opaque zone around the colonies	Positive, irridescent sheen on the colony surface and medium	35-37°C	24-48 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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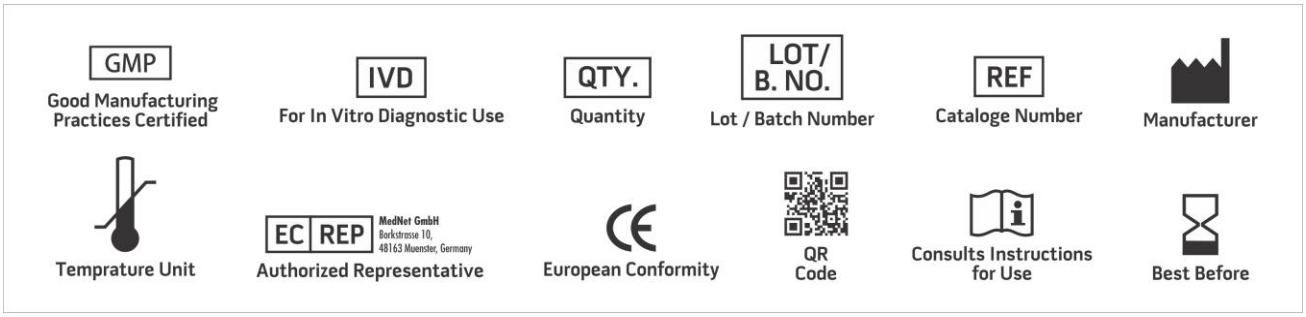

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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