TM 221 – MITIS SALIVARIUS AGAR BASE

INTENDED USE

For isolation of Streptococci from mixed cultures, especially *Streptococcus mitis*, *Streptococcus salivarius* and *Streptococcus faecalis* from grocely contaminated specimens.

PRODUCT SUMMARY AND EXPLANATION

Streptococcus species are mostly commensal residents of the mouth and throat, though several may act as opportunistic pathogens and a few as primary pathogens. *Streptococcus* "viridans" group consists of *Streptococcus salivarius* and *Streptococcus mitis*. They exhibit different types of haemolysis when grown on Blood Agar Base. Therefore, it is difficult to differentiate these organisms found in saliva from the other accompanying flora. Mitis Salivarius Agar Base is used for the isolation of *S.mitis, S. salivarius* and *Enterococcus faecalis* from mixed cultures. *E. faecalis* is the most common member of the Enterococci to cause infections in humans and is also a cause of human endocarditis. Mitis Salivarius Agar is formulated as per Chapman. This medium (with 1% potassium tellurite) is a highly selective medium, which enables to isolate streptococci from highly contaminated specimens like exudates from body cavities and faeces etc., as it inhibits a wide variety of bacteria. Some authors have also used sodium azide in this medium to inhibit the growth of gram-negative bacteria like Proteus.

COMPOSITION

Ingredients	Gms / Ltr
Agar	15.000
Crystal Violet	0.0008
Trypan blue	0.075
Dipotassium phosphate	4.000
Sucrose	50.000
Casein enzymic hydrolysate	15.000
Peptic Digest of animal Tissues	5.000
Dextrose	1.000

PRINCIPLE

Casein enzymic hydrolysate and peptic digest of animal tissue in the medium provide the essential growth nutrients. Dextrose and sucrose are the fermentable carbohydrates. Dipotassium phosphate buffers the medium. Trypan blue is an acidic, blue diazo dye while crystal violet is a basic dye and also a bacteriostatic agent, which inhibits many gram-positive organisms. Potassium tellurite also helps to make the medium selective for streptococci. Occasionally *Streptococcus mutans* strains may be inhibited on Mitis Salivarius Agar Base due to the high concentration of trypan blue in the medium. Also some S. mitis strains may be more easily distinguished with longer incubation.

INSTRUCTION FOR USE

- Suspend 90.07 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.
- Cool to 50-55°C and add 1 ml of sterile 1% Potassium Tellurite Solution. Do not reheat the medium after the addition of tellurite solution.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light blue homogeneous free flowing powder

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

pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation with added 1% Potassium Tellurite.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	50-100	Luxuriant	>=70%	Blue- Black	35-37°C	18-48 Hours
Streptococcus intermedius	9895	50-100	Luxuriant	>=70%	Blue	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Luxuriant	>=70%	Blue	35-37°C	18-48 Hours
Streptococcus salivarius	13413	50-100	Luxuriant	>=70%	Blue (Gum Drop)	35-37°C	18-48 Hours
Escherichia coli	25922	>=10^3	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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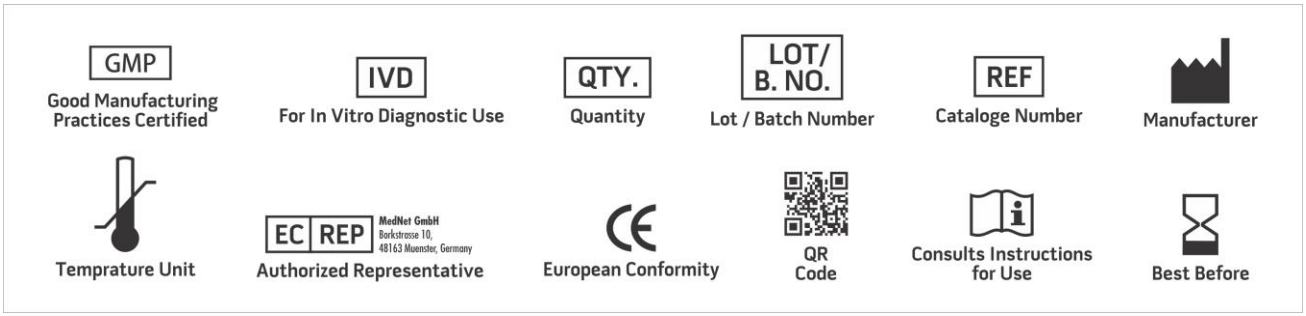

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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