TM 1090 - STAPHYLOCOCCUS AGAR NO. 110 W/ AZIDE

INTENDED USE

For selective isolation of Staphylococci for clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Staphylococcus Agar No. 110 is formulated as described by Chapman for selective isolation and enumeration of *Staphylococci* from clinical as well as nonclinical specimens. Staphylococcus Agar No. 110 with azide is used for determination of coagulase positive Staphylococci in meat pies even in the presence of large number of *Bacillus* species. This medium is recommended by APHA. The addition of blood in the medium enables to study haemolytic reaction and with egg yolk enables to study lecithinase production by *Staphylococcus aureus*. This medium is selective due to high salt concentration and differential on the basis of ability of organism to ferment mannitol, produce pigment and gelatin liquefaction.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	2.500
Gelatin	30.000
Lactose	2.000
D-Mannitol	10.000
Sodium chloride	75.000
Dipotassium hydrogen phosphate	5.000
Sodium azide	0.100
Agar	15.000

PRINCIPLE

Tryptone and yeast extract which provide essential growth factors like vitamins, nitrogen, carbon compounds, sulphur and trace nutrients etc. to the organisms. High concentration of sodium chloride inhibits many bacterial species except Staphylococci. Sodium azide inhibits gram-negative organisms. Mannitol fermentation can be visualized as yellow colouration by addition of a few drops of bromo thymol blue to the areas of the plates from where colonies have been removed. Gelatin liquefaction can be seen when the plates are flooded with a saturated aqueous solution of ammonium sulphate. *Enterococcus faecalis* may grow on this medium as small colonies with little mannitol fermentation.

INSTRUCTION FOR USE

- Dissolve 149.6 grams in 1000 ml of distilled water.
- Mix thoroughly, heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Dissolve the precipitate by gentle agitation to avoid bubbles and pour the plates while the medium is hot. Alternatively, cool the medium to 45 - 50°C and add blood or egg yolk if desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation. (Mannitol fermentation - on addition of BTB; Gelatinase production: flooding plate with standard aqueous solution of ammonium sulphate)

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Mannitol fermentation (on addition of BTB)	Pigment Production	Gelatinase Production flooding plate with standard aqueous solution of ammonium sulphate	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. *aureus*	25923	50-100	Good-luxuriant	>=50%	Positive reaction	Positive	Positive reaction	35-37°C	48 Hours
Staphylococcus epidermidis	12228	50-100	Good-luxuriant	>=50%	Variable reaction	Negative	Positive reaction	35-37°C	48 Hours
Enterococcus faecalis	29212	50-100	Good	40-50%	Slight reaction	Negative	Variable reaction	35-37°C	48 Hours
Escherichia coli	25922	$>=10^3$	Inhibited	0%	-	-	-	35-37°C	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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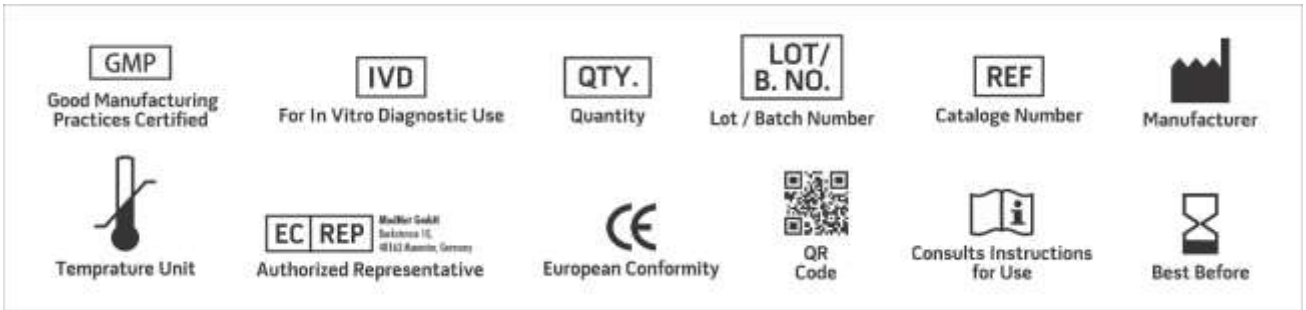

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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