CM 20608 – DNASE TEST AGAR W/ TOLUIDINE BLUE

INTENDED USE

For detection of deoxyribonuclease activity of microorganisms and for identification of staphylococci.

PRODUCT SUMMARY AND EXPLANATION

DNaseTestAgar w/ toluidineblue isused for detecting deoxyribonuclease activity of bacteria and fungi and particularly for identification of pathogenic Staphylococci. With added toluidine blue, it is used in differentiation and identification of non-pigmented Serratia species isolated from clinical sources that might be improperly identified as Enterobacter and Klebsiella species. DNase activity was observed by Weckman and Catlin in Micrococci and found the correlation with coagulase activity as coagulase positive species were DNase positive. Di Salvo confirmed the results of Weckman and Catlin and observed accurate correlation of DNase and coagulase activity. In his experiment Di Salvo incorporated DNA and calcium chloride to activate DNase enzyme. Schreier modified DNase medium by adding toluidine blue. Modified medium achieved faster identification of Serratia marcescens and could differentiate Serratia from other members of the Enterobacteriaceae.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	20.000
Deoxyribonucleic acid (DNA)	2.000
Sodium chloride	5.000
Toluidine blue	0.100
Agar	15.000

PRINCIPLE

Themedium consists of Tryptose which provide essential nutrients. DNase depolymerizes the DNA resulting in the formation of a clear zone around the microbial growth which is visualized by flooding the plate with hydrochloric acid. When toluidine blue is added to the medium itself, DNase activity results in the production of a bright pink reaction due to the metachromatic property of toluidine blue. Some strains of Staphylococci may be inhibited on DNase Test Agar due to toluidineblue .

INSTRUCTION FOR USE

Dissolve 42.10grams in 1000 ml purified/distilled water.
Heat with frequent agitation to dissolve the medium completely.
Sterilize by autoclaving at 118°C to 121°C for 15 minutes. Cool to 45-50°C.
Mix well and pour in sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to light blue homogeneous free flowing powder.
Appearance of prepared medium	: Blue coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.3 ± 0.2

INTERPRETATION

Culturalcharacteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	DNase Activity	Incubation Temperature	Incubation Period
Serratia marcescens	8100	50-100	luxuriant	>70%	Positive reaction, pink to red zone around the growth	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	luxuriant	>70%	Positive reaction, pink to red zone around the growth	35-37°C	18-24 Hours
Staphylococcus epidermidis	12228	50-100	luxuriant	>70%	Negative reaction	35-37°C	18-24 Hours
Streptococcus pyogenes	19615	50-100	luxuriant	>70%	Positive reaction, pink to red zone around the growth	35-37°C	18-24 Hours

PACKAGING:

Inpacksizeof100 gm bottles.

STORAGE

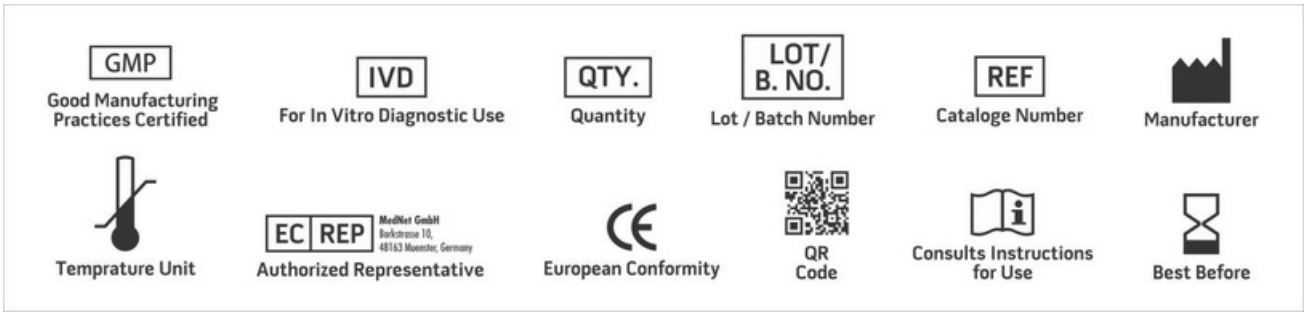
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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

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

REFERENCES

1. DiSalvo, 1958, Med. Tech. Bull., U.S. Armed Forces Med. J., 9:191.
2. Schreir, 1969, Am. J. Clin. Pathol., 51:711.
3. Streitfeld, Hoffman and Janklow, 1962, J. Bact., 84:77.
4. Weckman and Catlin, 1957, J. Bact., 73:747



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

*For Lab Use Only