TM 1190 - GTC AGAR BASE

INTENDED USE

For cultivation of Enterococci from food within 18 hours.

PRODUCT SUMMARY AND EXPLANATION

Enterococci are gram-positive cocci causing a multitude of infections in humans such as urinary tract infections, bacterial endocarditis, diverticulitis and meningitis. Until 1984, members of Enterococci were classified as Group D Streptococci. Group D Streptococci are prevalent in the faecal material of humans and other animals. Numerous media have been proposed for the isolation of Group D Streptococci which employed sodium azide as a selective agent at concentrations ranging from 0.01 to 0.04%. Sodium azide when used as an inhibitor of non-enterococcal group bacteria have several disadvantages. However, favourable results were obtained when gentamicin was used as a selective agent for Group D Streptococci. GTC Agar Base described by Hartmann and Donnely employedgentamicin and thallus acetate as inhibitors of non-enterococcal bacteria while allowing selective isolation of all faecal streptococci.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Sodium chloride	5.000
Monopotassium phosphate	5.000
Dextrose	1.000
Esculin	1.000
Thallous acetate	0.500
Ferric citrate	0.500
Polysorbate 80	0.750
Agar	15.000

PRINCIPLE

Casein enzymic hydrolysate and papaic digest of soyabean meal provide nitrogenous nutrients to the organisms. Dextrose serves as easily metabolizable carbon source. Streptococci hydrolyze esculin to esculetin and dextrose. Esculetin and ferric ammonium citrate forms dark brown to black complex, imparting dark brown colour to the colony. Gentamicin and thallus acetate are the major selective agents in GTC Agar Base. Addition of sodium bicarbonate, polysorbate 80 and monopotassium phosphate stimulates the growth of Group D Streptococci.

INSTRUCTION FOR USE

- Dissolve 24.37 grams in 500 ml 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 rehydrated contents of 1 vial of GTC Supplement and 10 ml of sterile 10% Sodium Bicarbonate Solution just before use.
- Mix well and pour into sterile Petri plates

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

Cultural characteristics observed with added GTC Supplement and sterile 10% Sodium bicarbonate solution after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Esculin hydrolysis	Incubation Temperature	Incubation Period
Escherichia coli	25922	>=10^3	Inhibited	0 %	-	35-37°C	18 - 24 Hours
Enterococcus faecalis	29212	50-100	Good-luxuriant	>=50%	Positive reaction, black zone around the colony	35-37°C	18 - 24 Hours
Staphylococcus aureus	25923	>=10^3	Inhibited	0 %	-	35-37°C	18 - 24 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.

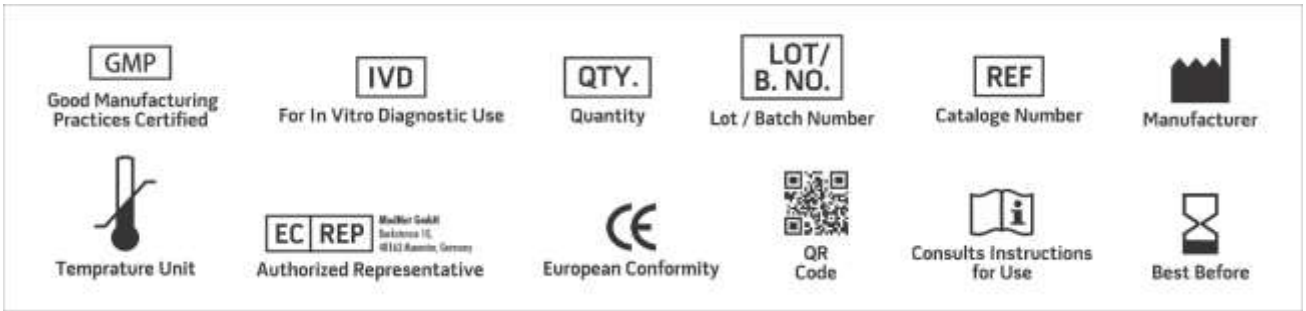
DISPOSAL

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

REFERENCES

1. Donnely L. S. and Hartman P. A., 1978, App. Environ. Microbiol., 35 :576-581.
2. Cooper K. E. and Ramadan F. M., 1955, J. Gen. Microbiol., 12:180.
3. Kenner B. A et al, 1960, Am. J. Public Health, 50:1553.
4. Ostrolenk M. and Hunter A. C., 1946, J. Bacteriol., 51:735.
5. Winter C. E., and Sandholzer L. A., 1946, J. Bacteriol., 51:588.
6. Hartman P. A. and Thian T., 1981. Appl. Environ. Microbiol., Vol. 41., No 3: p-724.
7. Hartman P. A., Reinbold G. W., Saraswat D. S., 1966, Adv. Appl. Microbiol., 8:253.
8. Black W. A. and Buskirk F. Y., 1973, J. Clin. Pathol., 26:154.
9. Dilworth J. A. et al, 1975, J. Clin. Microbiol., 28: 411.
10. Buchanan R.E and Gibbons N. E., (Eds.), 1974, Bergeys Manual of Determinative Bacteriology, 8th Ed., Williams and Wilkins Co., Baltimore.

11. Efthymion C. J., and Joseph S. W., 1974, Appl. Microbiol., 28: 411.
12. Kenner B. A. et al, 1960, Am. J. Public Health., 50:1553.
13. Beandon E. C., Litsky W., 1981, B. J. Dutka Ed.
14. Skinner F.A., Quesnel L. B., 1978, Academic Press, New York, N.Y.
15. Schleider K. H., Kilpper B. R., 1984, Int. J. Sys. Bacteriol., 34 :31



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

***For Lab Use Only**

Revision: 08 Nov., 2019