

CM 21247 - MUELLER TELLURITE AGAR BASE

INTENDED USE

For isolation, cultivation and differentiation of *Corynebacterium diphtheriae*.

PRODUCT SUMMARY AND EXPLANATION

Corynebacterium diphtheriae is gram-positive, facultative anaerobic, non-motile bacteria. It is the etiological agent for diphtheria. Many species of *Corynebacteria* can be isolated from various places such as soil, water, blood, and human skin. Pathogenic strains of *Corynebacteria* can infect plants, animals, or humans. Though humans are now the only known reservoir for the disease. The bacterium is generally found in temperate zones but may also be found in other parts of the world. Various tellurite media such as Mcleods, Hoyles, or CTBA have been used for isolation and differentiation of *C. diphtheriae*.

Mueller Tellurite Agar has been recommended for isolation, cultivation and differentiation of *C. diphtheriae*. Potassium tellurite in the medium inhibits the growth of most of the normal flora of the upper respiratory tract allowing *C. diphtheriae* and other saprophytic *Corynebacteria* to grow.

COMPOSITION

Ingredients	Gms / Ltr
Casein acid hydrolysate	20.000
Casein powder	5.000
Potassium dihydrogen phosphate	0.300
Magnesium sulphate. heptahydrate	0.100
L-Tryptophan	0.050
Agar	20.000

PRINCIPLE

This serum used in medium enhances granule formulation. Casein acid hydrolysate and L-tryptophan provide nitrogenous compounds. Magnesium sulphate supplies essential ions required by the organisms. *diphtheriae* forms grayish black colonies surrounded by dark brown halo due to H₂S production.

INSTRUCTION FOR USE

- Dissolve 45.45 grams of dehydrated media in 975 ml distilled water.
- Gently heat and bring to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool quickly to 50°C and aseptically add 25 ml Mueller Tellurite Serum.
- Mix thoroughly to distribute into sterile Petri plates.
- Allow the surface of the plates to dry by partially removing the covers during solidification.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder : Cream to yellow homogeneous free flowing powder.
- Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates.
- pH (at 25°C) : 7.4±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Corynebacterium diphtheriae	11913	50-100	Luxuriant	>=70 %	35-37°C	24-48 Hours
Corynebacterium xerosis	7094	50-100	Luxuriant	>=70 %	35-37°C	24-48 Hours

PACKAGING:

Inpacksize 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.

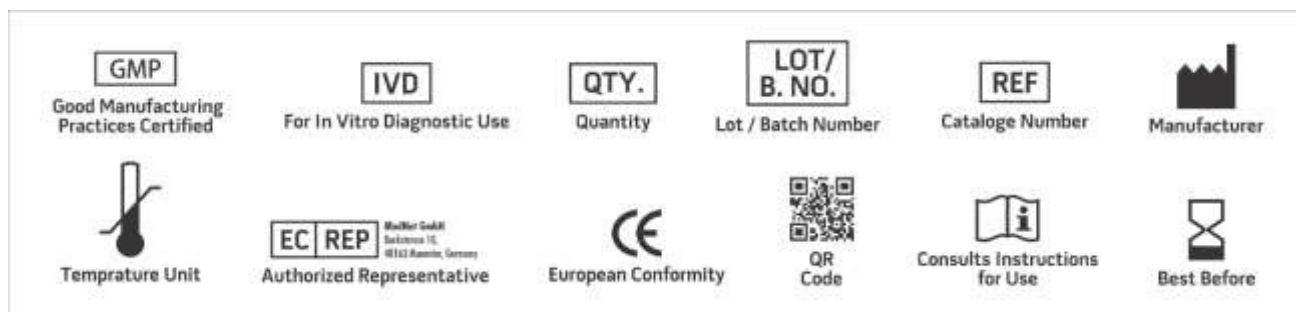
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Anderson J. S., Happold F. C., McLeod J. W., Thomson J. G, 1931, J. Pathol. Bacteriol., 34:667:88.
2. Hoyle L., 1941, Lancet 1:175-176.
3. Saragea A., Maximescu P., Meitert E., 1979, Methods in Microbiol, Vol. 13 Bergman T., Norris J. R. (Eds.), Academic Press, London, p. 61-76.
4. Atlas R. M., 1993, Handbook of Microbiological Media, Parks L.C. (Ed.) CRC Press, Inc.



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

*For Lab Use Only

