CM 20481 – CITRATE AZIDE TWEEN CARBONATE BASE

INTENDED USE

For the identification of Enterococci in meat, meat products, dairy products and other foodstuffs.

PRODUCT SUMMARY AND EXPLANATION

Enterococci may be considered anessential part of the autochthonous microflora of humans and animals. Because of its wide distribution, Enterococci can also occur in different food commodities, especially those of animal origin. Enterococcus faecalis and Enterococcus faecium are relatively heat-resistant and may characteristically survive in traditional milk pasteurization procedures.

E. faecium is markedly heat-tolerant and is a spoilage agent in marginally processed canned hams. Most of the Enterococci are relatively resistant to freezing, and, unlike Escherichia coli, they readily survive this treatment. A wide variety of selective media for Enterococcus has been recommended and used. Indicator substances added to the media are useful for the recognition of Enterococci and for the rapid identification of single species on the basis of colony appearance. Citrate Azide Tween Carbonate Base is a selective media formulated by Burkwall and Hartmann. It was later modified by Reuter for the identification of Enterococci in meat, meat products, dairy products and other foodstuffs. The test sample can be directly streaked on the surface of the agar.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	15.000
Yeast extract	5.000
Potassium dihydrogen phosphate	5.000
Sodium citrate	15.000
Tween 80	1.000
Agar	15.000

PRINCIPLE

Casein enzymic hydrolysate and yeast extract in the medium provide nitrogen, vitamins and amino acids. Tween 80 acts as a neutralizer, which inactivates residual disinfectants if present in the collected sample. The high concentrations of citrate inhibit the growth of the accompanying microbial flora. Triphenyl Tetrazolium Chloride (TTC) is reduced by Enterococci to form a red formazan, which imparts red colour to the colonies. Sodium azide helps in the selective isolation of Enterococci.

INSTRUCTIONFOR USE

Dissolve 28 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 50°C.
Aseptically add the rehydrated contents of 1 vial of CATC Supplement.
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 : Yellow coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Culturalcharacteristics observed after incubation with added CATC Supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Streptococcus pyogenes	12344	50-100	None-poor	0-10%	-	35-37°C	18-24 Hours
Streptococcus agalactiae	13813	50-100	None-poor	0-10%	-	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Good-luxuriant	>=50%	Red	35-37°C	18-24 Hours
Enterococcus faecalis	33186	50-100	Good-luxuriant	>=50%	Red	35-37°C	18-24 Hours
Enterococcus faecium	6057	50-100	Good	40-50%	Red colonies may or may not be observed	35-37°C	18-24 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours
Staphylococcus aureus	25923	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours

PACKAGING:

Inpacksizeof500 gm bottles.

STORAGE

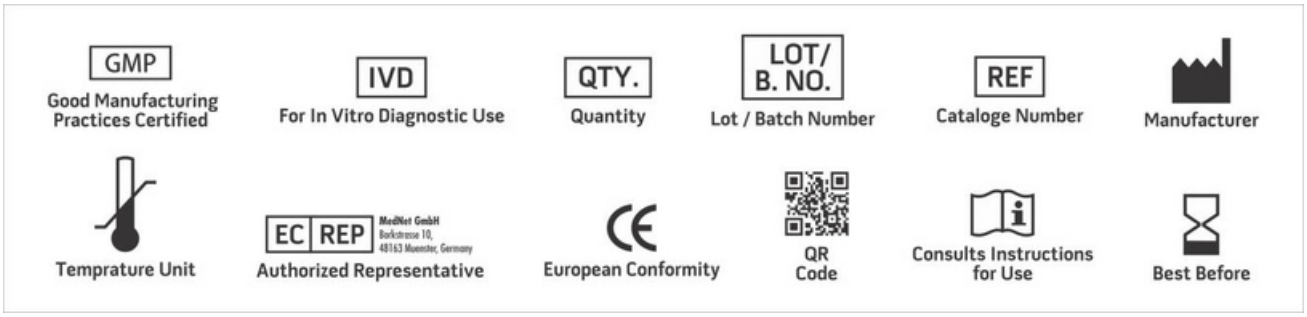
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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

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

REFERENCES

1. Belzer R.: Vergleichende Untersuchungen von Enterokokkenselektivnährböden-Inaug. Dissert., Univ. München, 1983.
2. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
3. Burkwall M. K., and Hartman P. A., 1964, Appl. Microbiol., 12; 18-23.
4. Reuter G., Arch F., Lebensmittelhyg., 1968, 19; 53-57 and 84-89.



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

*For LabUse Only