

TM 2041 – 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 an essential 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.

INSTRUCTION FOR 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

Cultural characteristics observed after incubation with added CATC Supplement.

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

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP MedNet GmbH Barkstrasse 10, 48163 Münster, Germany Authorized Representative	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

***For Lab Use Only**
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