TM 501 - YERSINIA SELECTIVE AGAR BASE (CIN AGAR)

INTENDED USE

For selective isolation enumeration of *Yersinia enterocolitica* from clinical & food samples.

PRODUCT SUMMARY AND EXPLANATION

Yersinia Selective Agar Base with added Yersinia Selective Supplement is used to isolate *Y. enterocolitica* from clinical and non-clinical specimens. *Yersinia enterocolitica* is widely distributed in lakes and reservoirs. Epizootic outbreaks of diarrhea, lymphadenopathy, pneumonia and spontaneous abortions occur in various animals. It is the most common species of *Yersinia* recovered from clinical specimens. *Y.enterocolitica* is biochemically more active at room temperature than at 37°C.

COMPOSITION

Ingredients	Gms / Ltr
Peptone, special	20.000
Yeast extract	2.000
Mannitol	20.000
Sodium pyruvate	2.000
Sodium chloride	1.000
Magnesium sulphate	0.010
Sodium deoxycholate	0.500
Neutral red	0.030
Crystal violet	0.001
Agar	12.500

PRINCIPLE

The formulation is based on CIN Agar of Schiemann and is recommended by ISO Committee. Schiemann modified his previous formula of CIN medium by replacing bile salts with sodium deoxycholate. The medium differentiates between mannitol fermenting and non-fermenting bacteria. Microorganisms that ferment the sugar mannitol acidify the medium and cause a localized drop in pH around the colonies. In presence of neutral red, the colonies take red colour. Mannitol negative organisms form colourless and translucent colonies. The medium is selective due to the presence of sodium deoxycholate and crystal violet, which inhibit gram-positive and a number of gram-negative bacteria. Addition of antibiotic supplement makes it highly selective for *Yersinia*. Typical colonies of *Y. enterocolitica* will form dark red colonies resembling bull's eye, which are normally surrounded by a transparent border. Colony size, smoothness and ratio of the border to center diameter may vary among different serotypes.

INSTRUCTION FOR USE

- Dissolve 29.00 grams in 500 ml purified / 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 reconstituted contents of 1 vial of Yersinia Selective Supplement.
- Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

Cultural characteristics observed with added Yesinia Selective Supplement after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	>=10^3	Inhibited	0%	-	22-32°C	24-48 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-	22-32°C	24-48 Hours
Escherichia coli	8739	>=10^3	Inhibited	0%	-	22-32°C	24-48 Hours
Staphylococcus aureus subap. aureus	25923	>=10^3	Inhibited	0%	-	22-32°C	24-48 Hours
Staphylococcus aureus subap. aureus	6538	>=10^3	Inhibited	0%	-	22-32°C	24-48 Hours
Proteus mirabilis	25933	>=10^3	Inhibited	0%	-	22-32°C	24-48 Hours
Pseudomonas aeruginosa	27853	>=10^3	Inhibited	0%	-	22-32°C	24-48 Hours
Yersinia enterocolitica	27729	50-100	Good-luxuriant	>=50%	Transluscent with dark pink Centre & bile precipitate	22-32°C	24-48 Hours
Yersinia enterocolitica	23715	50-100	Good-luxuriant	>=50%	Transluscent with dark pink Centre & bile precipitate	22-32°C	24-48 Hours

Yersinia enterocolitica	9610	50-100	Good-luxuriant	>=50%	Transluscent with dark pink Centre & bile precipitate	22-32°C	24-48 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. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
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4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
6. Schiemann D. A., 1979, Can. J. Microbiol., 25: 1298.
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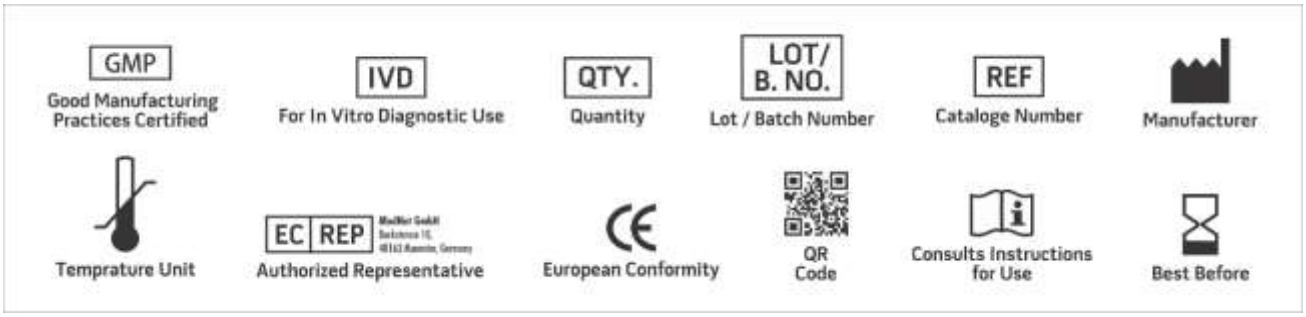

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019