

CM 21509 – RIPPEY CABELLI AGAR BASE

INTENDED USE

For isolation of *Aeromonas hydrophila* from water samples using membrane filter technique.

PRODUCT SUMMARY AND EXPLANATION

Aeromonas species are natural inhabitants of aquatic environments worldwide. Their populations are seasonal in all natural waters. *Aeromonas* cause serious diseases of aquatic animals and represent an economic threat to the aquaculture industry. The motile *aeromonads* have emerged as a serious microbial threat to human populations, especially the immunocompromised. *Aeromonas* can be enumerated in water samples by employing the membrane filter technique. Rippey-Cabelli (RC) Agar, formulated by Rippey and Cabelli is used for this purpose. The medium is differential as it depends on the ability of organisms to ferment trehalose and selective due to the incorporation of selective agents.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	5.000
Trehalose	5.000
Yeast extract	2.000
Sodium chloride	3.000
Potassium chloride	2.000
Magnesium sulphate	0.200
Iron (III) Chloride	0.100
Bromo thymol blue	0.040
Agar	15.000

PRINCIPLE

The medium consists of Tryptose and yeast extract support the growth of *Aeromonas* species. Bromothymol blue is the pH indicator, which changes from blue to yellow colour under acidic conditions, created due to fermentation of trehalose. Sodium chloride maintains the osmotic equilibrium whereas potassium chloride, magnesium sulphate and ferric chloride provide essential ions.

Ampicillin, sodium deoxycholate and ethanol are the selective agents inhibiting gram-positive bacteria, coliforms, *Shigella* species, *Proteus mirabilis* and *Actinomyces*. Ethanol inhibits overgrowth of *Klebsiella* species on the filter. Most of the Enterobacteriaceae ferment trehalose, therefore it is difficult to distinguish *Aeromonas* from Enterobacteriaceae. The medium gives higher specificity and sensitivity when pure cultures are used.

INSTRUCTION FOR USE

Dissolve 16.17 grams in 500 ml distilled water.

Heat to boiling to dissolve the medium completely and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.



- ☐ Cool to 50°C and aseptically add 5 ml ethanol and rehydrated contents of 1 vial of Rippey Cabelli Selective Supplement.
Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to pale green homogeneous free flowing powder.
Appearance of prepared medium	: Dark green coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 8.0 ± 0.2

INTERPRETATION

Cultural characteristics observed with added Rippey-Cabelli Supplement after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Trehalose fermentation	Incubation Temperature	Incubation Period
Aeromonas hydrophila	7966	50-100	Good-luxuriant	≥50%	Positive reaction, yellow colour	35-37°C	24 Hours
Escherichia coli	25922	50-100	None-poor	≤10%	Negative reaction, blue green colour	35-37°C	24 Hours
Shigella flexneri	12022	≥10 ³	Inhibited	0%	-	35-37°C	24 Hours
Staphylococcus aureus	25923	≥10 ³	Inhibited	0%	-	35-37°C	24 Hours

PACKAGING:

In pack size of 100 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

- Eaton A. D., Clesceri L. S. and Greenberg A. E., (Eds.), 1995, Standard Methods for the Examination of Water and Wastewater, 19th Ed., American Public Health Association, Washington, D.C.
- Austin B., Altwegg M., Gosling P. and Joseph S. W., (Eds.), 1996, The Genus Aeromonas, John Wiley and Sons, Chichester, U.K.

