

TM 1593 – R-3A BROTH

INTENDED USE

For cultivation and maintenance of heterotrophic bacteria from potable water.

PRODUCT SUMMARY AND EXPLANATION

The total bacterial count of drinking water is determined by plate count on a nutritionally rich medium. However, all organisms present are not able to grow on them, either because they are slow growers or because they can't grow on that media. For this reason, a nutritionally reduced medium was described. R-2A Agar is a modification of this medium. Many bacteria from natural waters, which contain limited nutrients at ambient temperature, grow best on the media with less nutrient levels. They grow better at the temperatures below the routine laboratory incubation temperatures of 35 to 37°C.

R-3A Agar is a subculture medium which is used to subculture the organisms recovered on nutritionally deficient R-2A Agar. R-3A Broth is similar in composition to R-3A Agar, except agar.

COMPOSITION

Ingredients	Gms / Ltr
Casein Acid Hydrolysate	1.000
Yeast extract	1.000
Biopeptone	1.000
Dextrose	1.000
Starch soluble	1.000
Dipotassium phosphate	0.600
Magnesium sulphate	0.048
Sodium pyruvate	0.600

PRINCIPLE

This medium consists of casein acid hydrolysate, yeast extract, biopeptone as source of essential growth factors required for metabolism of the bacteria. Dextrose is the energy source. Starch acts as a neutralizer that neutralizes any toxic metabolites, if present. Phosphate buffers the medium while sodium pyruvate supplies additional nutrition. Magnesium sulphate serves as a source of ions. Due to the presence of the above mentioned ingredients these media allow the growth of stressed and chlorine tolerant bacteria present in treated waters.

INSTRUCTION FOR USE

- Dissolve 6.25 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely. Dispense into tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 min. DO NOT OVERHEAT.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to yellow coloured homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear solution in tubes.
pH (at 25°C) : 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Candida albicans</i>	10231	10-100	Good-luxuriant	35-37°C	24-72 Hours
<i>Escherichia coli</i>	25922	50-100	Good-luxuriant	35-37°C	24-72 Hours
<i>Salmonella</i> Enteritidis	13076	50-100	Good-luxuriant	35-37°C	24-72 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Good-luxuriant	35-37°C	24-72 Hours
<i>Salmonella</i> Typhi	6539	50-100	Good-luxuriant	35-37°C	24-72 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. Reasoner and Geldreich, 1985, Appl. Environ. Microbiol., 49:1.
2. Stark and McCoy. 1938. Zentralbl. Bacteriol. Parasitenkd. Infektionskr. Hyg. Abt.2 98 : 201
3. Collins and Willoughby, 1962, Arch. Microbiol., 43:294.



GMP
Good Manufacturing
Practices Certified


Best Before

QTY.
Quantity

REF
Catalogue Number


Manufacturer


Temperature Unit

**LOT/
B. NO.**
Lot / Batch Number


Consults Instructions
for Use


QR
Code

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

***For Lab Use Only**
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